


FLORIDA INTERNATIONAL UNIVERSITY
Graduate Catalog
1997-98



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Florida International University

Member of the State University System
Miami, Florida

1997 - 1998 Graduate Catalog

Contents

2	Academic Calendar
6	State Board of Education
6	Florida Board of Regents
6	Executive Council
6	General Information
8	Accreditation and Memberships
9	Academic Degree Programs
12	Admissions
15	Registration
21	Financial Aid
24	Academic Affairs
29	Business and Finance
32	North Campus and Enrollment Services
33	University Advancement and Student Affairs
37	University Outreach
39	University Relations
40	Intercollegiate Athletics
41	Centers and Institutes
51	Statewide Course Numbering System
53	Administration and Staff
55	College of Arts and Sciences
129	College of Business Administration
157	College of Education
209	College of Engineering and Design
253	College of Health
273	School of Hospitality Management
279	School of Journalism and Mass Communication
285	School of Nursing
291	College of Urban and Public Affairs
317	Campus Maps
319	Index

FIU and Florida International University are registered marks. Florida International University believes in equal opportunity practices which conform to all laws against discrimination and is committed to nondiscrimination with respect to race, color, creed, age, handicap, sex, marital status, or national origin. Additionally, the University is committed to the principle of taking the positive steps necessary, to achieve the equalization of educational and employment opportunities.

Note: The programs, policies, requirements, and regulations published in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes in programs, policies, requirements, and regulations may be made without advance notice. **The ultimate responsibility for knowing degree requirements and the requirements imposed upon students by State law rests with the students.**

This public document was produced at a cost of \$11,091 or \$0.90 per copy to inform the public about University Programs.

Fees given in this catalog are tentative pending legislative action.

ACADEMIC CALENDAR 1997-1998*

Fall Semester 1997

March 15	Priority Deadline for Financial Aid Applications 1997-1998.
March 31	Registration Access Information available for Multi-Term Registration.
April 1	Last day for International Students to submit applications and all supporting documents for Fall Term admission
April 7-11	Official Multi-Term Registration for Degree Seeking Students only, by appointment day and time.
April 14-April 18	Open Multi-Term Registration.
April 21 -May 2	Summer registration only.
May 26	First day to apply for Fall 1997 term graduation.
May 30	Admission application priority consideration deadline (except international students).
July 7 - 8	Freshman Orientation Sessions (University Park).
July 10 - 11	Freshman Orientation Sessions (University Park and North Campus).
July 15 - 16	Freshman Orientation Sessions (University Park and North Campus).
July 17	Transfer Student Orientation Sessions (North Campus).
July 18	Transfer Student Orientation Sessions (University Park).
July 21	Registration Access Information available for Fall 1997 term.
July 22	Transfer Orientation Sessions (University Park).
July 23	Transfer Orientation Sessions (North Campus).
July 24	Transfer Orientation Sessions (University Park).
July 28	Short Term Tuition Loan Applications available for registering students.
July 28-Aug 1	Official Registration Week (Degree-Seeking Students only) by appointment time and day.
August 4-22	Open Registration.
August 7-8	Freshman Orientation Sessions(North Campus).
August 12-13	Freshman Orientation Sessions (University Park).
August 18-19	Freshman Orientation Sessions (North Campus).
August 19-20	Freshman Orientation Sessions (University Park).
August 20	Transfer Orientation Sessions (North Campus).
August 20	Graduate International Student Orientation Session (University Park)
August 21	International Student Orientation Session (University Park & North Campus)
August 21	Transfer Orientation Sessions (University Park).
August 21-24	Housing check-in (All students, 9 am-8 pm).
August 22	Last day to register without incurring a \$100.00 late registration fee.
August 25	Classes begin.
August. 25-29	Registration for State Employees using fee waivers.
August 29	Last day (by 5 p.m.) to pay tuition and fees to avoid cancellation of enrollment. <ul style="list-style-type: none"> •Last day (by 5 p.m.) to complete Late Registration. •Drop/Add Period ends at 5 p.m. •Last day to change a grading option. •Last day (by 5 p.m.) to drop courses or withdraw from the University without incurring a financial liability. •Last day for Financial Aid recipients to validate class schedules to retain registered courses. •Last day for students to apply and to sign Short Term Tuition Loan promissory notes and validate class schedules. •Last day (by 5 pm) to apply for graduation at the end of Fall 1997 term.
September 1	Labor Day Holiday (University closed).
September 5	October 4th CLAST exam registration deadline.
September 19	Last day (by 5 p.m.) to withdraw from the University with a 25% refund of tuition.
September 19	Faculty Convocation.
October 2 - 3	Rosh Hashanah**
October 4	CLAST Test.
October 11	Yom Kippur**
October 16 - 17	Sukkot**
October 17	Deadline (by 5 p.m.) to drop a course with a DR grade. <ul style="list-style-type: none"> •Deadline (by 5 p.m.) to withdraw from the University with a WI grade.
October 23 - 24	Sukkot**
November 11	Veterans' Day Holiday (University Closed).
November 27-28	Thanksgiving Holiday (University Closed).

December 5	Classes end.
December 6-12	Official Examination Period.
December 14	Commencement Exercises.
December 16	Grades due.
December 18	Grades available to students by telephone and at kiosks.
December 25	Christmas Holiday (University Closed).

Spring Semester 1998

August 29	Last day for international Students to submit applications and all supporting documents for Spring Term admission.
September 15	First day to apply for Spring 1998 term graduation.
September 26	Admission application priority consideration deadline (except international students).
November 3	Registration Information Access available for Spring 1998 term.
November 5 - 6	Freshman Orientation Sessions (University Park and North Campus).
November 7	Transfer Student Orientation (University Park and North Campus).
November 11	Veterans' Day Holiday (University Closed).
November 17 - 21	Registration Information, Advising and Access Codes available for Spring 1998 term
November 24 - 28	Official Registration Week (Degree-Seeking Students only) by appointment time and day.
November 27 - 28	Thanksgiving Holiday (University closed). Telephone registration available.
December 1 - 5	Open Registration.
December 5	Last day to register without incurring a \$100.00 late registration fee.
January 1	New Year's Day (University Closed).
January 2	International Student Orientation Session (University Park & North Campus).
January 2-4	Housing check-in 9 a.m. - 8 p.m.
January 5	Classes begin.
January 5 - 9	Registration for State Employees using fee waivers.
January 9	<ul style="list-style-type: none"> • Short Term Tuition Loan Applications available to students planning to register for Spring Term. • Last day (by 5 p.m.) to pay tuition and fees to avoid cancellation of enrollment. • Last day (by 5 p.m.) to complete Late Registration. • Drop/Add Period ends at 5 p.m. • Last day to change grading option. • Last day (by 5 p.m.) to drop courses or withdraw from the University without incurring a financial liability. • Last day for Financial Aid recipients to validate class schedules to retain registered courses. • Last day for students to apply and to sign Short Term Tuition Loan promissory notes and validate class schedules. • Last day (by 5 p.m.) to apply for Spring 1998 term graduation.
January 13	Financial Aid Applications available for 1998-1999.
January 19	Martin Luther King Holiday (University Closed).
January 23	Last day to register for the February 21st CLAST exam.
January 30	Last day (by 5 p.m.) to withdraw from the University with a 25% refund of tuition.
Feb. 13-April 17	Spring 1998 Mini-Semester
February 21	CLAST Test.
February 27	<ul style="list-style-type: none"> • Last day (by 5 p.m.) to drop a course with a DR grade. • Last day (by 5 p.m.) to withdraw from the University with a WI grade.
March 16 - 21	Spring Break.
April 10	Good Friday**
April 11 - 12	Passover**
April 17-18	Passover**
April 17	Classes End.
April 18 - 24	Official Examination Period.
April 27	Commencement Exercises.
April 28	Grades due.
April 30	Grades available to students by telephone and at kiosks.
April 30	International Student Orientation Session (University Park & North Campus).

Complete Summer Semester 1998

January 30	Last day for International Students to submit applications and all supporting documents for Summer Term admission.
February 27	Admission application priority consideration deadline (except international students).
April 13 - 17	Registration Information, Advising and Access Codes available for Summer/Fall 1998 terms.
April 14	Transfer Orientation Session (North Campus).
April 15	Transfer Orientation Session (University Park).
April 20 - 14	Official Registration Week (Degree-Seeking Students only) by appointment time and day.
April 27 - May 1	Open Registration.
May 1	Last day to register without incurring a \$100.00 late registration fee.
May 2-3	Housing Check-in 9 a.m. to 8 p.m. for Summer Term A.
May 4	Classes begin.
May 4-8	Registration for State Employees using fee waivers. • Short Term Loan Applications available to students planning to register for Summer Term.
May 8	Last day (by 5 p.m.) to pay tuition and fees to avoid cancellation of enrollment. • Last day (by 5 p.m.) to complete Late Registration. • Drop/Add Period ends at 5 p.m. • Last day to change grading option. • Last day (by 5 p.m.) to drop courses or withdraw from the University without incurring a financial liability. • Last day for Financial Aid recipients to validate class schedules to retain registered courses. • Last day for students to apply and to sign Short Term Tuition Loan promissory notes and validate class schedules. • Last day (by 5 p.m.) to apply for Summer 1998 graduation. • Last day (by 5 p.m.) to apply for Summer 1998 graduation.
May 9	Last day to register for the June 7th CLAST exam.
May 25	Memorial Day Holiday (University closed).
May 29	Last day (by 5 p.m.) to withdraw from the University with a 25% refund of tuition.
May 31 - June 1	Shavuot**
June 7	CLAST Test.
June 25	International Student Orientation Session (University Park & North Campus).
June 26	Last day (by 5 p.m.) to drop a course with a DR grade. • Last day (by 5 p.m.) to withdraw from the University with a WI grade.
June 26-28	Housing Check-in 9 a.m. to 8 p.m. for Summer Term B
July 4	Independence Day (University Closed).
August 11	Classes end
August 13	Grades due.
August 17	Grades available to students by telephone and at kiosks.

Summer Term A

May 2-3	Housing check-in, 9 a.m to 8 p.m.
May 4	Classes begin.
May 4-8	Registration for State Employees using fee waivers.
May 8	Last day (by 5 p.m.) to pay tuition and fees to avoid cancellation of enrollment. • Last day (by 5 p.m.) to complete Late Registration. • Drop/Add Period ends at 5 p.m. • Last day to change grading option. • Last day (by 5 p.m.) to drop courses or withdraw from the University without incurring a financial liability. • Last day for Financial Aid recipients to validate class schedules to retain registered courses.
May 9	Last day to register for June 9th CLAST exam.
May 25	Memorial Day Holiday (University closed).
May 29	Last day (by 5 p.m.) to drop a course with a DR grade. • Last day (by 5 p.m.) to withdraw from the University with a WI grade. • Last day (by 5 p.m.) to withdraw from the University with a 25% refund of tuition.
June 7	CLAST Test.
June 19	Classes end.***
June 23	Grades due.
June 25	Summer Term A grades available to students by telephone and at kiosks.
August 17	Final grades and GPA calculation available by telephone and at kiosks.

Summer Term B

June 15 - 26	Summer Term B registration resumes.
June 17-18	Freshman Orientation Sessions (North Campus).
June 18-19	Freshman Orientation Sessions (University Park).
June 22-23	Freshmen Orientation (University Park and North Campus).
June 25-26	Freshmen Orientation (University Park and North Campus).
June 26	Last day to register without incurring \$100.00 late registration fee.
June 26-28	Housing Check-in 9 a.m. to 8 p.m. for Summer Term B.
July 4	Independence Day (University Closed).
June 29	Classes begin.
June 29- July 6	Registration for State Employees using fee waivers.
July 6	<p>Last day (by 5 p.m.) to pay tuition and fees to avoid cancellation of enrollment.</p> <ul style="list-style-type: none"> • Last day (by 5 p.m.) to complete Late Registration. • Drop/Add Period ends at 5 p.m. • Last day to change grading option. • Last day (by 5 p.m.) to drop courses or withdraw from the University without incurring a financial liability. • Last day for Financial Aid recipients to validate class schedules to retain registered courses.
July 24	<p>Last day (by 5 p.m.) to drop a course with a DR grade.</p> <ul style="list-style-type: none"> • Last day (by 5 p.m.) to withdraw from the University with a WI grade. • Last day (by 5 p.m.) to withdraw from the University with a 25% refund of tuition.
August 11	Classes end.
August 13	Grades due.
August 17	Grades available to students by telephone and at kiosks.

*Calendar dates are subject to change. Please contact appropriate offices for verification and updates.

**No examinations or major quizzes may be given during the designated hours. Jewish holidays begin at 4 p.m. the day before the holiday and end at 7 p.m. the day of the holiday.

***Grades will be posted on transcripts. However, graduation will not be processed until the end of the Complete Summer Term, August 11.

General Information

State Board of Education

Lawton Chiles	<i>Governor</i>
Sandra B. Mortham	<i>Secretary of State</i>
Robert Butterworth	<i>Attorney General</i>
Robert F. Milligan	<i>Comptroller</i>
Bill Nelson	<i>State Treasurer and Insurance Commissioner</i>
Bob Crawford	<i>Commissioner of Agriculture</i>
Frank T. Brogan	<i>Commissioner of Education</i>

Florida Board of Regents

Elizabeth G. Lindsay	<i>Chairman, Sarasota</i>
Steven J. Uhlfelder	<i>Vice-Chairman Tallahassee</i>
Andrea I. Anderson	<i>Ft. Myers</i>
Julian Bennett Jr.	<i>Panama City</i>
Frank T. Brogan	<i>Commissioner of Education</i>
Paul Cejas	<i>Miami</i>
Charlton B. Daniel, Jr.	<i>Gainesville</i>
James F. Heekin, Jr.	<i>Orlando</i>
Philip D. Lewis	<i>Riviera Beach</i>
Gwendolyn F. McLin	<i>Okahumpka</i>
Jon C. Moyle	<i>West Palm Beach</i>
Dennis M. Ross	<i>Tampa</i>
Welcom H. Watson	<i>Fort Lauderdale</i>
Charles B. Reed	<i>Chancellor, State University System</i>
James R. Harding	<i>Student Regent</i>

Executive Council

Modesto A. Maidique	<i>President</i>
James A. Mau	<i>Provost and Vice President for Academic Affairs</i>
Richard J. Correnli	<i>Vice President for North Campus and Enrollment Services</i>
Cynthia Curry	<i>Vice President for Business and Finance</i>
Paul D. Gallagher	<i>Vice President for University Advancement and Student Affairs</i>
Mary L. Pankowski	<i>Vice President for University Outreach and Intercollegiate Athletics</i>
Steve Sauls	<i>Associate Vice President for University Relations</i>

History

Florida International University, a member institution of the State University System of Florida, was established by the State Legislature on June 22, 1965. Classes began at University Park on September 19, 1972, with nearly 6,000 students enrolled in upper-division undergraduate and graduate programs. In 1981 the University added lower division classes for freshmen and sophomores, expanding its enrollment capacity. In 1984, the University received authority to begin offering degree programs at the doctoral level; these programs received Level IV accreditation from the Southern Association of Colleges and Schools (SACS) in 1986.

The Florida Board of Regents appointed Charles E. Perry as the first president of FIU in July of 1969. He was succeeded in June, 1976 by President Harold Brian Crosby. Gregory Baker Wolfe was named the third president in February, 1979. Modesto A. (Mitch) Maidique was named the fourth President of Florida International University on August 27, 1986. Maidique received his Ph.D. in Electrical Engineering from the Massachusetts Institute of Technology and was associated with MIT, Harvard, and Stanford for 20 years.

University Mission

Florida International University (FIU) is an urban, multicampus, doctoral-granting institution located in Miami, Florida's largest population center with campuses at University Park and North Miami, selected programs offered in Davie and Fort Lauderdale, and off-campus continuing education programs. The mission of this state University is to serve the people of Southeast Florida, the state, the nation and the international community by imparting knowledge through excellent teaching, creating new knowledge through research, and fostering creativity and its expression.

Chartered by the Florida Legislature in 1965, the University opened its doors in 1972 to the largest entering class in United States collegiate history. With strong undergraduate programs centered around a rigorous liberal arts core curriculum, FIU now offers more than 200 baccalaureate, master's and doctoral de-

gree programs through its many Colleges and Schools: Arts and Sciences, Business Administration, Urban and Public Affairs, Education, Engineering and Design, Health, Hospitality Management, Journalism and Mass Communication, and Nursing. The University's increasingly prominent art museum, its libraries, and specialized centers and institutes enhance these programs. The University continues to balance its programs for full- and part-time degree-seeking students and to address the special needs of lifelong learners, traditionally and through distance learning. Campus life fosters a sense of community which provides for the intellectual, aesthetic, social, emotional, physical and moral development of students while providing opportunities for leadership training, awareness of cultural diversity, and a sensitivity to social issues and concerns.

Southeast Florida and FIU are alike in their explosive growth, rich ethnic and cultural diversity, and quest for excellence. FIU is a leading institution in one of the most dynamic, artistically expressive, and cosmopolitan cities in the United States, the gateway for Latin America and the Caribbean. The continued globalization of the world's economic, social and political systems adds to the importance of FIU's mission, and combines with our subtropical environment, and our strategic location to strengthen Southeast Florida's role as an information and transportation center.

From this unique setting we have derived five key strategic themes that guide the University's development: International, Environmental, Urban, Health, and Information. We focus on these themes with a commitment to quality management and cultural diversity. To summarize the University priorities: first, to graduate a well educated, ethnically diverse student body by continuing to enhance our teaching and by broadening our graduate and professional programs; second, to promote research and creative activities by nurturing strategically selected disciplines which contribute to the social, artistic, cultural, economic, environmental and technological foundations for the 21st century; and third, to solve critical health, social, educational, and environmental problems through ap-

plied research and service. These strategic themes and priorities guide our pursuit of recognition as one of America's top 25 urban public research universities by the end of this century. (Approved by Florida Board of Regents, September 1993)

Goals

Florida International University (FIU), a comprehensive, multi-campus urban research institution, is committed to providing both excellence and access to all qualified students desiring to pursue higher education. FIU offers a comprehensive undergraduate liberal arts education structured around a rigorous core curriculum. The University also offers a number of highly-regarded master's and doctoral programs in six of its colleges and schools.

The University's academic programs are designed to achieve four major goals:

1. To provide an excellent university education for all qualified students, challenging and stimulating them at the lower-division level and preparing them to choose a major field in the upper division, leading to selection of a profession or occupation or further study at the graduate level. FIU encourages its graduates, as educated citizens, to pursue lifetime opportunities to contribute to the development of their community's cultural, aesthetic, and economic environments through participation.

2. To generate new knowledge through a vigorous and ambitious commitment to research in all academic disciplines and to encourage creativity by fostering an atmosphere conducive to the expression of ideas, artistic development, and communication with the external community.

3. To serve the university's external community, with special attention to Dade, Broward, and Monroe counties, enhancing South Florida's capacity to meet its cultural, economic, social and urban challenges as we move into the 21st century.

4. To foster greater global understanding as a major center of international education for the people of the Americas and the international community.

Campuses

The University operates two campuses in Dade County and two educational sites in Broward County.

The main campus is located at University Park in west Dade County, approximately 10 miles west of downtown Miami.

The North Campus is adjacent to Biscayne Bay, at Northeast Biscayne Boulevard and 151st Street.

The Broward County area is served cooperatively by FIU and FAU with locations on the campus of Broward Community College in Davie and the University Tower in downtown Fort Lauderdale. FIU also offers classes in South Dade on the Homestead campus of Miami-Dade Community College.

University Park

The University Park campus occupies 342 acres of land. Apartment-style residence halls, the Golden Panther Sports Arena, the Library, an environmental preserve and other athletic facilities contribute to a pleasant collegiate atmosphere. The university is currently in the midst of an \$200 million construction program - the largest in its history. Construction is underway on a \$37.5 million five-floor addition to the Library, a \$16 million Performing Arts Complex, and a \$7.5 million College of Education building. The university recently completed a new \$10 million residence hall, a multi-million dollar expansion of the Graham University Center, a football and track stadium and a new baseball stadium. Recently, the National Hurricane Center moved its offices from Coral Gables to a \$4 million facility on the University Park campus.

FIU also offers classes on the Homestead Campus of Miami-Dade Community College. Recently, FIU added a 38-acre urban research and training complex in West Dade known as the Center for Engineering and Applied Research.

North Campus

The North Campus of Florida International University educates more than 8,000 students on 200 acres on Biscayne Bay. Academic programs in Hospitality Management, Journalism and Mass Communication, Nursing, and Urban and Public Affairs are headquartered on the North Campus. In addition, degree programs in Arts and Sciences, Business Administration, Education, and Health are offered on the North Campus.

North Campus is the hub for FIU's community outreach efforts. It serves as the host campus to the Elders Institute, the HRS/Children and Families Professional Development Centre, the Institute of Government,

the Institute for Public Opinion Research, the Roz and Cal Kovens Conference Center, and the Southeast Florida Center on Aging.

Students may apply for admission and financial aid, register for classes and receive academic advising at North Campus.

The North Campus is administered by the Office of the Vice President of North Campus and University Outreach. The office is on the Third Floor of the Library. Representatives from the Divisions of Academic Affairs, Business and Finance, Student Affairs and Public Affairs are also found there. Liaisons with personnel in other Divisions and at University Park are coordinated through North Campus Administration and Operations.

FIU Broward

FIU faculty and administrators provide a comprehensive university presence in Broward County in cooperation with Broward Community College (BCC) and Florida Atlantic University (FAU). FIU offers a select number of full degree programs and a variety of supplementary courses at two Broward locations.

Undergraduate and graduate programs are held at the Central Campus of BCC, which is located in Davie. In concert with BCC, a "2+2" program permits students to enroll at BCC for the first two years of study and then to transfer to FIU for the completion of their undergraduate work, receiving a bachelor's degree.

The University Tower in downtown Fort Lauderdale serves as the administrative headquarters for the FIU Broward Programs and as a major instructional facility. It is utilized for graduate programs, research, administrative offices, and services. Both FIU Broward facilities are staffed to provide support services such as academic advisement, admissions, registration, and student activities.

General Academic Information

Florida International University offers over 200 academic programs at the bachelor's, master's, and doctorate degree levels which are designed to respond to the changing needs of the growing metropolitan areas of South Florida. Degree programs are offered in the College of Arts and Sciences, College of Business Administration, College of Education, College of Engineering and De-

sign, College of Health, School of Hospitality Management, School of Journalism and Mass Communication, School of Nursing, and College of Urban and Public Affairs.

In 1995, *U.S. News & World Report* magazine ranked FIU as one of the top 150 national universities in the country in the annual survey of "America's Best Colleges." The magazine had previously recognized the University as a "best buy" in higher education. In addition, FIU was named one of the best ten public commuter colleges in the U.S. in "Money Guide", an annual report by *Money* magazine.

Accreditation and Memberships

All academic programs of the University are approved by the State Board of Education and the Florida Board of Regents. The University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia, telephone number 404-679-4501) toward the baccalaureate, masters and doctoral degrees. The professional programs of the respective schools of the University are accredited or approved by the appropriate professional associations, or are pursuing full professional accreditation or approval.

The University is also an affiliate member of the Association of Upper Level Colleges and Universities, the American Association of State Colleges and Universities, the Florida Association of Colleges and Universities, the American Association of Community and Junior Colleges, National Association of Land-Grant Colleges, a Charter Member of the Southeast Florida Educational Consortium, and numerous other educational and professional associations. The following agencies have accredited professional programs at the University:

Accreditation Board for Engineering and Technology

Accrediting Commission on Education for Health Services Administration

Accrediting Council on Education in Journalism and Mass Communications

American Assembly of Collegiate Schools of Business

American Association of Colleges of Teacher Education

American Chemical Society

American Council of Construction Education

American Dietetics Association

American Medical Association

American Health Information Management Association

American Occupational Therapy Association

American Physical Therapy Association

American Society of Clinical Pathologists

Computer Science Accreditation Commission

Commission for the Accreditation of Allied Health Education

Council of Graduate Schools in the United States

Council on Education for Public Health

Florida Consortium on Multilingual and Multicultural Education

Florida State Board of Nursing

Landscape Architecture Accreditation Board (LAAB) of the American Society of Landscape Architecture (ASLA)

National Accrediting Agency for Clinical Laboratory Sciences

National Association of Colleges of Nursing

National Association of Schools of Music

National Association of Schools of Public Affairs

National Council for Accreditation of Teacher Education

National League of Nursing

Council on Social Work Education

Southeast Florida Educational Consortium

Florida International University, Broward Community College, and Miami-Dade Community College are charter members of the Southeast Florida Educational Consortium, which was established in 1977. This organization links the member institutions in planning, maintaining, and evaluating cooperative efforts in academic programs, student services, and administrative support services. The overall objectives of the Consortium are to:

1. Increase and improve educational opportunities.

2. Ensure smooth transition from the community college to the university.

3. Provide easy access to institutional services for students and faculty.

4. Effectively utilize human and fiscal resources.

Descriptions of specific cooperative arrangements between the Consortium member campuses and student and faculty procedures are given in the appropriate sections of this Catalog.

Academic Programs

College of Arts and Sciences

Master of Arts in:

Comparative Sociology
Economics
English
History
International Studies
Latin American and Caribbean Studies
Linguistics
Political Science
Religious Studies¹
Spanish

Master of Fine Arts in Creative

Writing

Master in Music

Master of Science in:

Biology
Chemistry
Computer Science
Environmental Studies
Environmental and Urban Systems
(jointly with the College of Engineering and Design)
Geology
Mathematical Sciences
Psychology
Physics

Doctor of Philosophy in:

Biology
Computer Science
Economics
Geology
History
International Relations
Political Science
Psychology
Sociology
Spanish

College of Business Administration

Master of Accounting
Master of Business Administration
Master of International Business
Master of Science in Finance
Master of Science in Taxation

Doctor of Philosophy in Business Administration

College of Education

Master of Science in:

Adult Education
Art Education
Counselor Education (School Counseling and Community Mental Health Counseling)
Early Childhood Education
Educational Leadership
Elementary Education

English Education
Health Education (*Exercise Physiology Track*)

Health Occupations Education
Home Economics Education
Human Resource Development
International Development Education

Modern Languages Education
(*majors in Spanish and French*)

Mathematics Education

Music Education

Parks and Recreation Management

Physical Education

Reading

Science Education

Social Studies Education

Special Education (*with a track in Varying Exceptionalities*)

Teaching English to Speakers of Other Languages (TESOL)

Technology Education

Urban Education

Vocational Education (majors in Administration and Supervision, and Technical and Vocational Industrial Education)

Education Specialist (Ed.S.)

Curriculum and Instruction

Educational Leadership

School Psychology

Doctoral Programs (Ed.D.)

Adult Education and Human Resource Development
Vocational and Technical Education Leadership Track
Curriculum and Instruction
Educational Administration and Supervision
Exceptional Student Education
Higher Education
Higher Education, Tracks
Higher Education Administration
Community College Teaching

College of Engineering and Design

Master of Science in:

Architecture
Civil Engineering
Computer Engineering
Construction Management
Electrical Engineering
Engineering Management
Environmental Engineering
Environmental and Urban Systems
Industrial Engineering
Mechanical Engineering
Landscape Architecture

Doctor of Philosophy in:

Electrical Engineering
Mechanical Engineering

College of Health

Master of Science in
Dietetics and Nutrition
Medical Laboratory Sciences
Occupational Therapy
Physical Therapy
Master of Public Health

School of Hospitality Management

Master of Science in Hotel and Foodservice Management

School of Journalism and Mass Communication

Master of Science in Mass Communication

School of Nursing

Master of Science in Nursing

College of Urban and Public Affairs

Master of Science in Criminal Justice
Master of Health Services Administration
Master of Public Administration
Master of Social Work

Doctor of Philosophy in Public Administration (jointly with FAU)
Doctor of Philosophy in Social Welfare

North Campus Programs

College of Arts and Sciences

Master of Fine Arts in Creative Writing

College of Education

Master of Science in Urban Education

College of Health

Master of Public Health

School of Hospitality Management

Master of Science in Hotel and Foodservice Management

School of Journalism and Mass Communication

Master of Science in Mass Communication

School of Nursing

Master of Science in Nursing

College of Urban and Public Affairs

Master of Science in Criminal Justice
Master of Health Services Administration
Master of Public Administration
Master of Social Work

Doctor of Philosophy in Public Administration (*jointly with FAU*)
Doctor of Philosophy in Social Welfare

Broward County Programs

College of Business Administration

Advanced Certificate in Accounting (UT)

Doctor of Philosophy in Business Administration (UT)

College of Education

Master of Science in Adult Education (UT)

Master of Science in Human Resource Development (UT)

Master of Science in Elementary Education (Broward Public Schools)

Courses for Teacher Education (Broward Public Schools)

Courses in Vocational Teacher Education (Off-Campus)

Doctor of Education in Adult Education and Human Resource Development (UT)

Doctor of Education in Higher Education (UT)
Majors in:
Higher Education Administration
Community College Teaching

Doctor of Education in Curriculum and Instruction (UT)

College of Engineering and Design

Master of Science in Construction Management (BC)

School of Hospitality Management

Bachelor of Science in Hospitality Management (BC)

College of Urban and Public Affairs

Master of Health Services Administration (UT)
Master of Social Work (UT)

Primary Location:

BC = Broward Program on BCC
Central Campus - Davie

UT = Askew University Tower -
Fort Lauderdale

Certificates

Certificate Programs are structured combinations of courses with a common base of interest from one or more disciplines into an area of concentration.

Successful completion of a Certificate Program is entered on the student's transcript and records. Two types of certificates are awarded:

Academic Certificate

Awarded by an academic unit to a student at the time of awarding a bachelor's degree; or upon completion of the appropriate coursework to a student who already has a bachelor's degree.

An academic certificate shall not be awarded to a student who does not possess either a bachelor's degree or does not complete a bachelor's degree program. An academic certificate is to be interdisciplinary in nature, to the greatest extent possible.

Professional Certificate

Awarded by an academic unit to an individual who completes the appropriate coursework in the area of concentration. The professional certificate does not need to be interdisciplinary or associated with a degree program.

For details and course requirements, refer to the appropriate catalog or section in each College or School.

College of Arts and Sciences

Academic Certificates in:

Actuarial Studies
African-New World Studies
American Studies
Consumer Affairs
Environmental Studies
Ethnic Studies
Gerontological Studies
International Studies
Judaic Studies
Labor Studies

Latin American and Caribbean Studies
Law, Ethics, and Society
Linguistic Studies
Western Social and Political Thought
Women's Studies

Professional Certificates in:

Labor Studies and Labor Relations
Legal Translation and Court Interpreting
Translation Studies
Tropical Commercial Botany

College of Business Administration

Academic Certificates in:

Accounting
Banking
Business Environment
International Bank Management
International Business
Marketing
Professional Certificates in:
Managing Quality Health Care Systems
Training and Human Resource Development
Human Resource

College of Education

The College offers a variety of Professional Certificate and Add-On Teacher Certification programs. Refer to the College of Education program listing section.

College of Engineering and Design

Professional Certificates in:

Heating, Ventilation, and A/C Design

College of Health

Health Promotion
Occupational Therapy

School of Hospitality Management

Hotel Lodging Management
Restaurant and
Foodservice Management
Travel and Tourism Management

School of Journalism and Mass Communication

Professional Certificates in:

Student
Media Advising
Integrated Communications:
Advertising and Public Relations
Spanish Language Journalism

College of Urban and Public Affairs

Professional Certificates in:

Development Administration and Management
Gerontology
Health Services Administration
Human Resource Policy and Management
International Comparative and Development Administration
Justice Administration and Policy Making
Law and Criminal Justice
Public Management

Evening and Weekend Degree Programs

College of Arts and Sciences

Master of Arts in

English
Psychology
Spanish

Master of Fine Arts in Creative Writing

Doctor of Philosophy in Geology

College of Business Administration

Master of Accounting
Master of Business Administration
Master of International Business
Master of Science in Finance
Master of Science in Taxation

Doctor of Philosophy in Business Administration

College of Education

Master of Science in:

Adult Education
Art Education
Counselor Education (*School Counseling and Community Mental Health Counseling*)

Early Childhood Education

Educational Leadership

Elementary Education

English Education

Health Education (*Exercise Physiology Track*)

Health Occupations Education

Home Economics Education

Human Resource Development

International Development Education

Modern Language Education (*majors in Spanish and French*)

Mathematics Education

Music Education

Parks and Recreation Management

Physical Education

Reading

Science Education

Social Studies Education

Special Education (*with a track in Varying Exceptionalities*)

Teaching English to Speakers of Other Languages (*TESOL*)

Technology Education

Urban Education

Vocational Education (majors in Administration and Supervision, and Technical and Vocational Industrial Education)

Education Specialist (Ed.S.)

Curriculum and Instruction

Educational Administration and Supervision

School Psychology

Doctoral Programs (Ed.D.)

Adult Education and Human Resource Development

Vocational and Technical Education Leadership Track

Curriculum and Instruction

Educational Leadership

Higher Education

Exceptional Student Education

College of Engineering and Design

Master of Science in:

Civil Engineering
Computer Engineering
Construction Management
Electrical Engineering
Engineering Management
Industrial Engineering
Mechanical Engineering

College of Health

Master of Science in

Dietetics and Nutrition
Medical Laboratory Sciences
Occupational Therapy

Master of Public Health

School of Journalism and Mass Communication

Master of Science in Mass Communication

College of Urban and Public Affairs

Master of Science in Criminal Justice

Master of Social Work

For more information, call the Office of Adult and Student Information Services (OASIS) at (305) 919-5669; or the appropriate college or school.

Office of Admissions

Florida International University encourages applications from qualified applicants without regard to sex, physical handicap, or cultural, racial, religious or ethnic background or association.

Applicants to a graduate program of the University must meet the minimum standards set forth by the Florida Board of Regents (BOR), the University, and when applicable, additional requirements set by each department for admission to a graduate program. Applicants must check the individual departmental requirements.

A student seeking admission into a graduate program of the University must have a bachelor's degree or equivalent from a regionally accredited institution or, in the case of foreign students, an institution recognized as an institution of higher learning. The applicant must submit official copies of all transcripts.

In most cases, an applicant must, at a minimum, present either a 'B' average in upper level work, or a combined score of 1000 on the Graduate Record Exam (GRE) or a score of 500 on the Graduate Management Admission Test (GMAT) when applicable and required by the individual department, or a graduate degree.

All graduate applicants, regardless of previous grade point average or degrees, are required to submit the appropriate test scores.

An applicant who fails to meet these criteria may appeal the admission decision and be considered under the BOR's Exception Policy. This policy allows up to 10 percent of the graduate students admitted for a particular academic year as exceptions to the above criteria.

Foreign graduate applicants are accepted subject to space and fiscal limitations. In addition to the above University admission requirements, foreign applicants must be academically eligible for further study in their own country and must demonstrate proficiency in the English language by presenting a minimum score of 500 or higher on the Test of English as a Foreign Language (TOEFL). However, some departments may require a higher TOEFL. Applicants who hold an undergraduate or graduate degree from an institution within the United

States or other English speaking countries are not required to submit TOEFL. The applicant must check the individual departmental requirements. For TOEFL information contact: TOEFL Program, P. O. Box 6151, Princeton, New Jersey 08541, U.S.A.

All credentials and documents submitted to the Office of Admissions become the property of Florida International University. Originals will not be returned to the applicant or forwarded to another institution.

Readmission

An admitted degree-seeking student who has not enrolled in any course at the University for one full academic year or more is eligible for readmission. The student must meet the University and program regulations in effect at the time of readmission. Students must contact the Office of Admissions to apply for readmission.

Application Dates

Summer

February 1: Last day for international students to submit applications and all supporting documents for Summer Term.

Last day to submit applications for Summer Term.

Fall

April 1: Last day for international students to submit applications and all supporting documents for Fall Term.

Last day to submit applications for Fall Term.

Spring

September 1: Last day for international students to submit applications and all supporting documents for Spring Term.

Last day to submit applications for Spring Term.

All international applications not received by the deadline date will be considered for the following term.

Transfer of Graduate Credit from Other Institutions

Doctoral programs may accept a maximum of 36 semester hours

earned elsewhere as a graduate degree-seeking student. A maximum of six semester hours of graduate credit earned from another institution in a non-degree seeking status may be transferred. A maximum of six thesis credit hours may be transferred to a doctoral program only if they are part of an earned degree.

Masters programs may accept a maximum of six semester hours of graduate credit earned from another institution beyond a bachelor's degree.

Acceptance of transfer credits for a course is dependent upon the following provisions:

a. the student received a grade of 3.0 or better on a 4.0 scale

b. the course was taken at an accredited institution

c. the course was relevant, as judged by the admissions committee of the department or program, to the graduate program in which the student is accepted

d. the course is listed on an official transcript received by the Office of Admissions

e. the course was completed within the six years preceding admission to the program (does not apply to credits earned as part of a completed graduate degree)

International Admissions

Graduate Admission Standards and Procedures

International student applicants must meet the admission requirements of the University as described in the previous sections and comply with the following:

Academic Records

Official transcripts, diplomas and/or certificates must be sent directly from each previous institution to the Office of Admissions. Documents in a language other than English must be translated by an official translation agency. Notarized translations are not acceptable.

Declaration and Certification of Finances

Upon receipt of the application for admission, the Declaration and Certification of Finances will be mailed to the applicant. It must be com-

Annual Estimate of Costs for Graduate International Students

Single Student (18 sem hrs)

Tuition and Fees ¹	\$ 7,308
Maintenance ²	\$ 7,908
Books & Supplies	\$ 904
Medical Insurance ³	\$ 576
Total	\$ 16,696

¹Tuition and fees are subject to change. Fees include the Student Health Fee (\$30 per semester) and the Athletic Fee (\$10.00 per semester). Amounts shown reflect nine semester hours for graduate during Fall and Spring terms only.

²Maintenance is estimated at \$878.75 per month to cover room, board, clothing, transportation, and incidentals. This cost is for nine months.

³All international students are required to carry medical insurance.

pleted and returned to the Office of Admissions. A Certificate of Eligibility (Form I-20A) will be issued once the applicant has been found admissible to the University.

The University is required by immigration authorities to check carefully the financial resources of each applicant prior to issuing the Form I-20A. Therefore, it is important that applicants are aware of the cost of attending the University and have the necessary support funds for the period of enrollment. Applicants should refer to the Annual Estimate of Cost Chart.

The total funds available for the student for the first or second academic year, or both, must equal the total estimate of institutional costs and living expenses. All items in the Declaration and Certification of Finances must be accurately answered to avoid unnecessary delay in processing. This document must be received by the Office of Admissions two months prior to the anticipated entry date.

Refer to the Annual Estimate of Cost table for more information. A married student should plan on an additional \$5,000 in costs to cover the living expenses of a spouse.

A couple with children should anticipate further yearly additional costs of no less than \$3,000 for each child.

Medical Insurance

The State of Florida requires that all international students maintain health insurance coverage to help defray the costs in case of catastrophic medical emergency. The policy must provide specific levels of coverage which have been established to ensure that the policy is adequate to provide for costs at U.S. hospitals, usually much higher than costs in many other parts of the world. In addition, a policy must have a claims agent in the United States who may be contacted by medical providers and who facilitates prompt payment of claims. The University has approved a plan which meets the state requirements and which meets the needs of most students; however, a student may select alternate coverage provided it meets the state requirements for minimal coverage. A copy of these requirements is available from the Office of International Students and Scholar Services. Students are advised not to purchase insurance policies prior to arrival without verifying that the policies meet FIU/SUS requirements. Compliance with the insurance regulation is required prior to registration.

Required Entrance Tests

Graduate applicants are required to take either the GRE or the GMAT. For information on the tests, applicants must contact the Educational Testing Service, Princeton, New Jersey 08540, U.S.A. Information about test center locations may also be obtained at the American Embassy in the applicant's home country.

Tuition

An international student is considered a non-resident and is assessed non-resident fees. Immigration regulations require an international student to attend school at least two semesters within an academic year. A graduate student is required to take a minimum of nine semester hours per term. Please refer to the section on Student Fees and Student Accounts for more information.

Full-Time Enrollment

Non-immigrant alien students in F-1 visa status are required by United States Immigration regulations to be enrolled full-time, except for the Summer Terms, and to make satisfactory progress toward the degree program in each term; otherwise the student's immigration status may be jeopardized. Full-time gradu-

ate enrollment is defined as enrollment every term for a minimum of nine semester hours.

The laws and regulations of the United States Department of Justice, Immigration and Naturalization Service state:

It is the student's responsibility to comply with all non-immigrant alien requirements as stated under the United States laws under Section 101(a)(15)(f)(i) of the Immigration and Nationality Act.

Granting official Extension of Stay is dependent upon the student's achieving normal academic progress toward the degree requirements.

Employment

The legal regulations governing F-1 student employment are complex, and advisors are available in the Office of International Students and Scholar Services to explain these regulations. In general, however, employment is available only to students who maintain their legal status in the U.S. and is regulated under three categories:

a) on-campus employment: F-1 students may be employed on the FIU campus for a maximum of 20 hours per week during fall and spring semesters while school is in session, and full time during holidays, vacations, and summer. On-campus employment includes teaching and research assistantships for graduate students and hourly part time work. Students must contact individual campus departments to inquire about employment opportunities.

b) off-campus employment: F-1 students may request off-campus employment under very limited conditions and only after maintaining F-1 status for at least one full academic year. Off-campus employment opportunities are not readily available, and students should not rely on off-campus employment as a source of income to finance their studies.

c) Practical training: F-1 students may request practical training employment to accept jobs related to their studies. Students usually pursue practical training employment after completion of degree requirements, although in some cases practical training may be authorized prior to completion of studies. Since practical training employment is limited to one year of full-time employment, students cannot rely on it as a

source of income to finance their studies.

Note: An international student will not be granted admission to the University until all academic and non-academic requirements have been met. Under no circumstances should a student come to the University without having received the official Letter of Admission and the I-20A Form.

All correspondence and document submissions should be directed to: Office of Admissions, Florida International University, PC (Charles E. Perry building) 140, University Park, Miami, Florida 33199 U.S.A.

Credit For Non-College Learning

Graduate credit will not be awarded for life experiences.

In cases where a student's learning experience would appear to have been sufficient to develop the understanding and skills associated with a course that would otherwise be included in his or her graduate program of study, he or she will be allowed to register for Independent Study credits and demonstrate competency through development of an appropriate project acceptable to the faculty member who represents that specific area of specialization.

Not more than 10 semester hours of a 30 semester hour master's degree, nor 15 semester hours of a 60 semester hour master's degree, may be so earned. A student wishing to have this policy waived, wholly or in part, may petition the Dean of the academic unit to which he or she has been admitted for special consideration, and final responsibility for a decision will rest with the Dean.

Traveling Scholar Program

The University participates in a traveling scholar program which enables a graduate student to take advantage of special resources, special course offerings, research opportunities, unique laboratories and library collections available on another campus but not available on his or her own campus. Further information may be obtained from the Dean of the graduate program in which the student is enrolled.

Student Right-to-Know Safety and Security Act

Under the Student Right-to-Know and Campus Security Act, Florida International University will, upon request, make available to students and potential students the completion or graduation rates of certificate or full-time degree-seeking students for a one-year period. Also available, upon request, are University policies regarding a) procedures for reporting criminal actions or other emergencies, b) access to campus facilities, c) campus law enforcement, d) crime prevention programs, e) statistics concerning arrests and the occurrence on campus of certain criminal offenses, f) criminal activity of off-campus student organizations, and the use, possession, and sale of illegal drugs or alcohol.

Office of the Registrar

The Office of the Registrar is responsible for directing the University registration activities, establishing, maintaining, and releasing students' academic records. The office is also responsible for space and scheduling, enrollment certification, Veteran's Affairs, graduation, and the Student Academic Support System (SASS). The office also produces the schedule of classes and the university catalogs.

The University Park office is located in PC 130, 348-2392, the North Campus office is located in ACI-100, 919-5750, and the Broward Programs at Broward Community College, Central Campus, 475-4160 and University Tower, 355-5236.

Classification of Students

The University classifies students as follows:

Degree-Seeking Students

This category includes students who have been admitted to a degree program, but have not completed the requirements for the degree.

Graduate - Students admitted to a graduate program.

Post Graduate - Students admitted to a doctoral program.

Non-Degree-Seeking Students

These students may be either affiliated or unaffiliated in their status. Unaffiliated students are limited to taking one semester of courses at the University. Affiliated students must be approved by the appropriate College or School and must meet its specific requirements. Under no circumstances may more than 15 hours, taken as a non-degree-seeking student be applied toward graduation requirements at the university, if the student changes from non degree seeking to degree-seeking status.

The following regulations apply to non degree seeking students:

1. Such students are not required to meet the usual admission requirements and are not officially admitted as regular students. Enrollment as a non-degree-seeking student does not imply a right for future admission as a regular, degree-seeking student. Credit earned will not be counted toward a degree at the University unless such students subsequently apply for regular admission

and are accepted as undergraduate or graduate students.

2. Registration is permitted on a space-available basis and is determined at the time of registration. Non degree seeking students may not register during the official registration week for degree-seeking students.

3. No more than 12 graduate level semester hours earned as a non degree seeking student may be counted toward a degree. The appropriate Dean must approve the acceptance of such credit.

4. Non degree seeking students will not be allowed to register for more than one term without obtaining admission to a degree program at the University, or obtaining admission into a formal certificate program, or acquiring affiliated status from the department in which they are registering.

5. Applicants denied admission to the University will not be allowed to register as non degree seeking students for a period of one year without obtaining admission into a formal Certificate Program or obtaining affiliated status from the appropriate academic department.

6. Immigration regulations prevent most foreign nationals from enrolling without being admitted into a formal degree or certificate program, depending on the visa type. Therefore, international students will not be permitted to enroll as non degree seeking students.

Affiliated Students

Students applying for affiliated status as non-degree seeking students must be approved by the appropriate Dean's Office in accordance with criteria approved by that College or School's Faculty Curriculum Committee.

Certificate Students

This category includes students who have been accepted into a specific certificate program by the academic department responsible for that program. Certificate programs are subject to all university regulations.

Academic Degree Requirements

Master's Degree

The University will confer the master's degree when the following conditions have been met:

1. Recommendation of the faculty of the College or the School awarding the degree.

2. Certification by the Dean of the College or the School concerned that all requirements of the degree being sought have been completed.

3. Earned an overall average GPA of 3.0 in all courses.

4. Met the grade requirements for major, core courses, and course sequences established by the appropriate College or School.

Doctoral Degree

The University will confer the doctoral degree when the following conditions have been met:

1. Recommendation of the faculty of the College or School awarding the degree.

2. Completion of the residency and time limitation requirements.

3. Satisfactory completion and defense of a doctoral dissertation.

4. Certification to the Registrar by the Dean of Graduate Studies that all academic requirements have been met.

Academic Definitions

Program and Course Regulations

Credit Hour: The term credit hour as used refers to one hour of classwork or the equivalent each week for an entire academic term.

Major: An integral part of the bachelor's and master's degree is a major concentration of coursework in an approved academic discipline or area. The exact course and credit requirements and prerequisites for each major are outlined in the departmental program areas in the Catalog.

Electives: Students may usually select courses from any academic area to complement their area or areas of study or to meet their interests in order to fulfill the credit hour requirements for the master's degree. Prerequisite course require-

ments should be considered in selecting elective courses. Students should refer to their academic program requirements concerning electives.

Certificate Programs

Students who have completed an approved certificate program will have an appropriate notation placed on their transcript.

College/Major Classification

Graduate students are classified according to the college or school and major of their degree program.

Full-time course load: Graduate, nine semester hours.

Change of College/School or Major

A fully admitted graduate student can change majors, provided he or she meets the entrance requirements of the new program, by obtaining and submitting the form to the Office of the Registrar. The student is subject to the program requirements in effect at the time of the change of major.

Registration

The following registration information is subject to change and students must verify the dates with the Office of the Registrar, PC 130, University Park; or ACI-100, North Campus; or at the Broward Program, BCC Central Campus, 475-4160 and University Tower, 355-5236.

All students, degree and non-degree-seeking, registering for more than 18 credit hours during one semester must obtain the approval and the signature of the Dean of their College or School.

* Registration for courses is as follows:

Registration Week is held during the preceding semester (check the Academic Calendar for the dates) and ends one week later. Degree seeking students are given an appointment day and time based on their classification, GPA, and credit hours completed. Students may also add/drop at this time.

Open Registration is held following Registration Week and lasts until the end of the first week of classes. There is no appointment day and time and registration is on a first-come, first-serve basis. All students who have not yet registered are encouraged to do so at this time. Students who have already registered may also add or drop courses during this period.

Telephone Registration

All students are able to find out their grade, registration appointment time, and day, registration holds (if any), and register, add and drop courses using a touchtone telephone. (305) 348-1500 or the on-campus kiosks.

To use the Telephone Registration System or the on-campus kiosks, students are given an access code by the Office of the Registrar. Call (305) 348-2320 for information.

Immunization

To register for courses, students, under the age of 40, must provide the University Health and Wellness Center, University Park; HM 110, North Campus) with documentation of immunization against measles and rubella. Students should contact the Health and Wellness Center for more information.

Late Registration Fee

Any student, degree seeking or non degree-seeking, who initiates registration after the registration deadline is assessed a \$100.00 late registration fee. Students may initiate late registration during the first week of classes.

Dropping and Adding Courses

The Official Drop/Add period runs throughout the first week of classes (*Refer to the Academic Calendar for specific dates*). During this period a student may add courses or register with a late registration fee. Students may also drop courses or withdraw from the University with no records of enrollment and without a tuition fee liability. Students may submit a drop/add card to the Office of the Registrar or use the Telephone Registration system to officially drop a course. If the tuition fee has already been paid, a refund will be issued by the Cashier's Office to the local address on file.

Late Adds

Students may add courses with appropriate authorization and signatures until the end of the third week of classes. No course can be added after this deadline.

Late Drops

Courses officially dropped after Drop/Add period and through the eighth week of the term (*summer terms have different deadlines*). Check the Academic Calendar for specific dates) are recorded on the student's transcript with a symbol of 'DR' (dropped). The student is finan-

cially liable for all dropped courses. The student must submit a Course Drop Form to the Office of the Registrar to officially drop a course. *Non-attendance or non-payment of courses will not constitute a drop.*

A student may appeal the deadline for a late drop by submitting the Appeal for Late Drop form. A drop after the deadline will be approved only in cases where circumstances beyond the student's control make it impossible for the student to continue. The student must provide appropriate documentation. The instructor will designate whether the student was passing or failing the course at the time of the appeal to drop. A 'WP' grade indicates the student withdrew from the class with a passing grade. A 'WF' grade indicates the student withdrew from the class with a failing grade. The 'WF' grade is calculated in the students term and cumulative GPA. The deadline to submit this appeal is the last day of classes of the term.

Withdrawal from the University

A currently registered student can withdraw from the university only during the first eight weeks of the semester. In the Summer Semester, withdrawal deadlines will be adjusted accordingly. A Withdrawal Form must be filled out and submitted to the Office of the Registrar. *Non-attendance or non-payment of courses will not constitute a withdrawal. (Refer to the Academic Calendar for the deadline dates.)*

The transcript of a student who withdraws before or during the first week of classes will contain no record of enrollment and no tuition fee will be assessed. If the tuition has already been paid, a refund will be issued by the Cashier's Office to the local address on file. If a student withdraws from the University prior to the end of the fourth week of classes, a 25 percent refund will be issued.

The transcript of a student who officially withdraws after Drop/Add period and before the end of the eighth week of the term will receive a 'W' for each course.

The transcript of a student who stops attending the university without officially withdrawing from the University will receive an 'F' grade for each course.

A student may appeal the deadline for a late withdrawal by submitting the Appeal for Late Withdrawal form. A withdrawal after the dead-

line will be approved only in cases where circumstances beyond the student's control make it impossible for the student to continue. The student must submit appropriate documentation. The instructor will designate whether the student was passing or failing the course(s) at the time of the appeal to withdraw. The deadline to submit this appeal is the last day of classes of the term.

Grading System

	Grade Points Per Grades Credit Hour
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	0.67
F Failure	0.00
P Satisfactory (Pass)	N/A
IN Incomplete ¹	N/A
WI Withdrew from University	N/A
WP Withdrew from University after deadline with passing grade	N/A
WF Withdrew from University after deadline with failing grade	0.00
AU Audit	N/A
DR Dropped Course	N/A
DP Dropped after deadline with passing grade	N/A
DF Dropped after deadline with failing grade	0.00
NR Grade Not Reported or Invalid ²	N/A
EM Examination	N/A

¹IN is only a temporary symbol. It will revert to the default grade after two consecutive terms.

²NR is only a temporary symbol. It will default to an 'F' after two terms if it is not changed by the instructor.

Note: All courses for which a student is officially registered at the end of the Drop/Add Period and for which a Letter Grade, a 'DF', or a 'WF' is received are calculated in the GPA.

Grading Options

The Colleges and the Schools make the determination of the grading option of each course. A course may

be offered for a letter grade as listed above or Pass/Fail; or for an optional grade in which the student has a choice of either receiving a letter grade or pass/fail; or the student may choose to audit a course and an 'AU' grade will be recorded on the student's record. The grading option must be indicated at the time of registration. The grading option cannot be changed after the first week of classes. There are no exceptions to this deadline.

To register for an audit, the student must obtain the permission and signature of the instructor of the course audited. Once the course is registered for as "Audit", the grading option cannot be changed.

Incomplete Grade

An incomplete grade is a temporary symbol given at the discretion of the instructor for work not completed because of serious interruption not caused by the student's own negligence. An incomplete must be made up as quickly as possible but no later than two semesters or it will automatically default to the grade that the student earned in the course. There is no extension of the two semester deadline. The student must not register again for the course to make up the incomplete.

Students who receive an incomplete grade and have applied for graduation at the end of the term, must complete the incomplete by the end of the fourth week of the following term.

Forgiveness Policy

A forgiveness policy is a way in which students may repeat a limited number of courses to improve their grade point average (GPA) by having only the grade received on the last repeat used in its calculation. Under the University's forgiveness policy, students must file a Repeated Course Form with the Office of the Registrar. There is no time limit on the use of the forgiveness policy for grades; however, the forgiveness policy cannot be used once a degree has been posted. All courses taken with the grades earned will be recorded on the student's transcript. The repeated course form will not be processed if the first or repeated grade received is 'DR', 'DP', 'IF', 'WI', 'WP', 'AU', 'NR', or 'EM'. Repeated courses will be appropriately designated (T: attempted; R: last repeat).

Graduate students may repeat no more than two courses under this rule with no course being repeated

more than once. The course shall be repeated on a letter grade basis. Only the grade and credit received in the second attempt shall be counted in computing the overall GPA. However, the original grade will remain posted on the student's permanent record, but will not be used in computing the overall GPA.

A course taken on a letter grade basis must be repeated on the same basis. Students will not be allowed additional credit or quality points for a repeated course unless the course is specifically designated as repeatable (independent study, studio courses, etc.). Students not using the forgiveness policy may still repeat a course. All attempts will apply to computation of the GPA but credit for one attempt will apply toward graduation. Students must check with the appropriate academic department to determine whether there are additional restrictions on repeating courses.

Departmental Credit by Examination

Departmental credit by examination is available for certain courses. A student who has already gained knowledge of a subject offered at the university and wishes to take an examination in lieu of taking the course should discuss the matter with his or her academic advisor and with the department offering the course.

Awarding departmental credit by examination is the prerogative of each academic unit. To receive credit by examination, a student must be a regular degree-seeking student. Once the student is awarded the departmental credit by examination, an 'EM' grade will be recorded on the transcript.

Change or Correction of Grades

Once submitted, end-of-semester grades (except incompletes and NR's, which default at the end of two terms) are final. They are subject to change only through a Change of Grade Form to correct an error in computation or transcribing, or where part of the student's work has been unintentionally overlooked.

Final Examinations

Final examinations will be given during the week following the last day of classes each semester. The Summer semesters do not have final examination periods and course examinations may be given at the

discretion of the faculty member teaching the course.

Final Grades

Final grades are available over the telephone registration system (305-348-1500) or through the on-campus kiosks and the World Wide Web.

Application for Graduation

Students who plan to graduate are required to submit to the Office of the Registrar an Application for Graduation form. This form must be submitted before the last day of classes of the academic semester prior to graduation. Students turning in the Application for Graduation after the deadline will graduate the following semester. There is no charge for applying for graduation.

Students who do not graduate must complete the remaining requirements needed for graduation and must re-apply for graduation.

Academic Warning, Probation, and Dismissal

Warning

A graduate student whose cumulative GPA falls below a 3.0 (graduate) will be placed on warning, indicating academic difficulty.

Probation

A graduate student on warning whose cumulative GPA falls below 3.0 (graduate) will be placed on probation, indicating serious academic difficulty. The College/School of the student on probation may indicate the conditions which must be met in order to continue to enroll.

Dismissal

A graduate student on Probation whose cumulative and semester GPAs fall below a 3.0 will be automatically dismissed from his or her program and the University. A graduate student will not be dismissed prior to attempting a minimum of 12 hours of coursework as a graduate student. The student has ten working days to appeal the dismissal decision. This appeal must be made in writing to the Dean of the College or the School in which the student is admitted. The dismissal from the University is for a minimum of one year. After one year, the student may apply for readmission (see Readmission) to the University in the same or a different program, or register as a non degree seeking student.

Dismissed students applying for admission or registering as non-de-

gree seeking students are placed on academic probation.

Student Records

Florida International University assures the confidentiality of student educational records in accordance with State University System rules, state, and federal laws including the Family Educational Rights and Privacy Act of 1974, as amended. Student academic records are maintained in the Office of the Registrar and in the academic department of the student's major. As a rule, all currently enrolled and former students have the right to review their records to determine their content and accuracy. Parents of dependent students, as defined by the Internal Revenue Code, and who give evidence of the dependent status, have the same rights. For the cost of photocopying, students may generally have copies of any documents in their file, except for other institutions' transcripts.

Release of Student Information from Educational Records

The disclosure or publication of student information is governed by policies of Florida International University and the Board of Regents of the State University System of Florida within the framework of State and Federal Laws, including the Family Educational Rights and Privacy Act of 1974.

A student's consent is required for the disclosure or publication of any information which is a) personally identifiable and b) a part of the educational record. However, certain exceptions to that generality, both in types of information which can be disclosed and in access to that information, are allowed within the regulations of the Family Educational Rights and Privacy Act. The following persons and organizations may have access to personally identifiable information without a student's prior consent:

A. Faculty, administrators, staff and consultants employed by the University or the Board of Regents whose work involves:

1. Performance of administrative tasks which relate to students;
2. Performance of supervisory or instructional tasks which relate to students; or
3. Performance of services which benefit students.

A student's prior consent is not required for disclosure of portions of

the educational record defined by the institution as Directory information. The following Directory information may be released by the University:

1. Name, local and permanent address and telephone number(s);
2. Date and place of birth, and sex;
3. Classification and major and minor fields of study;
4. Participation in officially recognized activities and sports;
5. Weight and height of members of athletic teams;
6. Dates of attendance, degrees and awards received;
7. The most recent previous educational agency or institution attended by the student; and
8. Photographic image.

The information above, designated by the University as Directory Information, may be released or published by the University without a student's prior written consent unless exception is made in writing by the student or the parents of a dependent student.

In order to prevent access to or release of Directory Information, students or the parents of dependent students, must notify the Registrar (PC 130), in writing prior to the first class meeting day of the semester. Access to, or release of Directory Information will be withheld until further written instruction is received from a student, or the parents of a dependent student.

Students have a right to challenge the accuracy of their educational records and may file written requests to amend these records. The Office of the Registrar (PC 130) may be contacted for further information regarding the procedure to follow for questions or problems.

For complete information regarding the policies outlined above, please contact:

University Registrar
Florida International University
University Park - PC 130
Miami, Florida 33199
e-mail: Register@fiu.edu

Student Social Security Numbers

FIU expects all students to have a valid social security number. Enrolled students who do not have one will have three months to provide the Registrar's Office with proof of a valid social security number.

Transcripts

The transcript is the complete student record of courses taken at the University, in addition to the number of transfer credits accepted. The GPA is calculated for all courses taken at the University after Fall Term 1975. Once a baccalaureate, master's, or doctorate degree is earned, the GPA recalculation starts again.

Students must request their transcript in writing. There is a 3-5 working days processing period. The transcript will not be released if the student has a University financial liability and/or a defaulted student loan. There is a \$5.00 charge per transcript.

Class Attendance

The University does not have an attendance policy. However, individual faculty may establish attendance criteria in classes where deemed necessary. Academic units may establish their own attendance policies with the approval of the Provost.

Policy Statement with Reference to Religious Holy Days

A faculty member who wishes to observe a religious holy day shall make arrangements to have another instructor conduct the class in his or her absence, if possible, or shall reschedule the class.

Because there are some classes and other functions where attendance may be considered essential, the following policy is in effect:

1. Each student shall, upon notifying his or her instructor, be excused from class to observe a religious holy day of his or her faith.
2. While the student will be held responsible for the material covered in his or her absence, each student shall be permitted a reasonable amount of time to make up any work missed.
3. No major test, major class event, or major University activity will be scheduled on a major religious holy day.
4. Professors and University administrators shall not penalize students arbitrarily who are absent from academic or social activities because of religious observances.

Veterans Information

The Office of Veterans Affairs assists all veterans and their dependents who wish to receive VA educational benefits. The Office also provides personal counseling, fee defer-

ments, tutorial assistance, and work-study jobs. The VA Office is located in PC 130, University Park; and in ACI-100, North Campus.

Veterans who are planning to attend the University should contact the Office of Veterans Affairs two months prior to the date of entry in order to expedite the processing of paperwork required to obtain educational allowances from the Veterans Administration.

Training Status

Full time	9 Credits
3/4 time	7 Credits
1/2 time	5 Credits
Less than 1/2 time	4 Credits

Rate of Payment Number of Dependents

For rate of monthly payment of educational allowances for veterans and dependents, please contact Office of Veteran's Affairs.

For additional information regarding other Veterans Educational Programs, contact the Office of Veterans Affairs at University Park, PC 130, 348-2838.

Enrollment Certification

The Registrar's office is responsible for certification of student's enrollment. Certifications cannot be processed if the student has a financial liability.

Enrollment Status - Graduate:

Full time: 9 credits or more.

Half time: 6 - 8 credits.

Less than half time: 5 credits or less.

Enrollment status is for continuous enrollment for the semester in which the student is in attendance. Reduction of course load will reflect the student's status. Contact the Registrar's office for further details.

Florida Residency Information - Florida Student Definition

For the purpose of assessing registration and tuition fees, a student shall be classified as a Florida or non-Florida Resident.

To qualify as a Florida Resident, the student must:

1. Be a U.S. Citizen, Resident Alien, parolee, Cuban National, Vietnamese Refugee, or other legal alien so designated by the U.S. Immigration and Naturalization Service.
2. Have established a legal residence in this State and have main-

tained that legal residence for 12 months immediately prior to the start of the term in which the student is seeking Florida resident classification. The student's residence in Florida must be as a bona fide domiciliary rather than for the purpose of maintaining a mere temporary residence or abode incident to enrollment in an institution of higher education, and should be demonstrated as indicated below (for dependent students as defined by IRS regulations, a parent or guardian must qualify).

3. Submit the following documentation (or in the case of a dependent student, the parent must submit documentation), prior to the last day of registration for the term for which resident status is sought:

a. Documentation establishing legal residence in Florida (this document must be dated at least one year prior to the first day of classes of the term for which Florida resident status is sought). The following documents will be considered in determining legal residence:

(1.) Declaration of Domicile.

(2.) Proof of purchase of a home in Florida which the student occupies as his or her residence.

(3.) Proof that the student has maintained residence in the state for the preceding year (e.g., rent receipts, employment record).

b. Documentation establishing bona fide domicile in Florida which is not temporary or merely incident to enrollment in a Florida institution of higher education. The following documents will be considered evidence of domicile even though no one of these criteria, if taken alone, will be considered conclusive evidence of domicile (these documents must be dated at least one year prior to the first day of classes of the term for which resident status is sought):

(1.) Declaration of Domicile.

(2.) Florida Voter's registration.

(3.) Florida Driver's license.

(4.) Proof of real property ownership in Florida (e.g., deed, tax receipts).

(5.) Employment records or other employment related documentation (e.g., W-2, paycheck receipts), other than for employment normally provided on a temporary basis to students or other temporary employment.

(6.) Proof of membership in or affiliation with community or state or-

ganizations or significant connections to the State.

(7.) Proof of continuous presence in Florida during the period when not enrolled as a student.

(8.) Proof of former domicile in Florida and maintenance of significant connections while absent.

(9.) Proof of reliance upon Florida sources of support.

(10.) Proof of domicile in Florida of family.

(11.) Proof of admission to a licensed practicing profession in Florida.

(12.) Proof of acceptance of permanent employment in Florida.

(13.) Proof of graduation from high school located in Florida.

(14.) Any other factors peculiar to the individual which tend to establish the necessary intent to make Florida a permanent home and that the individual is a bona fide Florida resident, including the age and general circumstances of the individual.

c. No contrary evidence establishing residence elsewhere.

d. Documentation of dependent/independent status (IRS return or affidavit).

A student can also qualify for Florida residency by one or more of the following criteria:

1. Become a legal resident and be married to a person who has been a legal resident for the required 12-month period, or,

2. Be a member of the Armed Forces on active duty stationed in Florida, or a spouse or dependent, or,

3. Be a member of the full-time instructional or administrative staff of a state public school, state community college or state university in Florida, a spouse or dependent, or,

4. Be a dependent and have lived five years with an adult relative who has established legal residence in Florida, or,

5. Be a former student at a public institution of higher education who was properly classified as a resident who re-establishes domiciliary status and re-enrolls within a period of 12 months, or,

6. Make a statement as to the length of residence in Florida and qualification under the above criteria.

Term Courses Are Offered

Listed next to certain courses in this catalog are the designations 'F', 'S', and 'SS'. These designations indicate that the academic department normally offers these courses during the 'F' (Fall), 'S' (Spring), 'SS' (Summer) terms. Students should be aware that there are circumstances beyond the University's control (low enrollments, financial constraints, or other extenuating situations) which may result in the courses not being offered as indicated. The University is not responsible for failure to offer a course as indicated.

Financial Aid

What Is Financial Aid

Financial aid is a source of financial support provided by various agencies (federal, state and local governments, universities, community organizations, and private corporations or individuals) to help students meet the cost of attending college. It includes gift-aid (grants and scholarships) and self-help (loans and student employment).

- Grants are awards based on financial need which do not have to be repaid.
- Scholarships are non-repayable awards based either on merit, special talent and/or financial need.
- Student loans are available to students and/or their parents at low interest rates (5 to 11%) with the option to defer repayment until after graduation or after the student drops below half-time.
- Student employment allows students to earn money toward their education by working part time while attending school.

Applying for Assistance

Applying for financial aid is a lengthy process, therefore it is important to begin early. Applications for financial assistance are available in January for the following academic year which begins in August. Financial Aid applications are not reviewed until ALL documents required to complete the file are received in the Financial Aid Office.

Completing your financial aid forms correctly and submitting them by the published deadline increases your potential to receive the maximum financial aid for which you are eligible.

Admissions

To be eligible for most financial aid programs, you must be admitted to a degree program. However, you should not wait until you are admitted to apply for assistance. Students pursuing or enrolled in qualified Certificate Programs are only eligible for Federal Family Education Loans.

Summer Assistance

Most financial aid funds are exhausted after students are awarded assistance for the Fall and Spring semesters. Typically, student loans are the primary source of assistance for Summer enrollment.

Transfer Student Procedures

Generally, financial aid cannot be transferred from one post-secondary institution to another during the academic year. If you plan to transfer in mid year, apply to both your current institution and Florida International University to insure consideration for all applicable financial assistance.

Eligibility Criteria

To qualify for most need-based financial assistance you must meet the following basic eligibility requirements:

- demonstrate financial need;
- be a U.S. citizen or eligible non-citizen;
- be registered with Selective Service, if required;
- not be in default on a loan, or owe a repayment on Title IV aid received at any institution;
- be enrolled at least half-time in an eligible program of studies;
- maintain satisfactory academic progress.

Additional requirements may apply depending on the aid programs awarded to you.

Determining Financial Need

Financial need is defined as the difference between the estimated cost of attendance and the amount you and your family can reasonably be expected to contribute towards your educational expenses. Need analysis is a federally mandated formula which measures, in an equitable and systematic way, how much students and their families can afford towards their higher education. Income, assets (excluding your primary residence), family size, number of family members attending college, and other items are evaluated to give a complete assessment of a family's financial strength.

Awarding Procedures

Students who complete their files by the priority deadline of March 15, have the greatest opportunity of being considered for those financial aid programs they requested and are qualified to receive for the academic year. Files are processed according to the completion date.

A financial aid package may consist of a combination of grants,

loans, and funds. Other sources of assistance such as merit awards and private and institutional scholarships will be taken into consideration when preparing the award.

Sources of Assistance

The University participates in all Federal and State funded programs. Institutional assistance is available for students with academic promise and financial need.

Graduate Assistance:

Graduate students pursuing a master's or doctoral degree may qualify for assistantships/fellowships and other awards offered through individual graduate academic units. To apply, contact the Dean's Office of your college or department. The Financial Aid Office makes a limited number of awards to graduate students who have demonstrated financial need through the Free Application for Federal Student Aid (FAFSA).

Financial Aid Services

Walk in Services

Financial Aid personnel are available Monday through Friday to answer general questions, distribute/accept application materials and provide information concerning application procedures and program requirements.

Financial Aid Counseling

A Financial Aid Administrator is available without an appointment during regular office hours to assist students with special problems, technical questions, exceptions, etc.

For additional information and application materials contact the Financial Aid Office: University Park, PC 125, Miami, FL 33199; North Campus, 3000 NE 145 St., ACI 100, North Miami, Florida 33181-3600, (305) 348-1500

Student Fees and Student Accounts

Fees

Registration and tuition fees are established by the Board of Regents as required by the Florida Legislature. These fees are subject to change without notice. The currently authorized fees are:

Credit Hour Fees

	Florida Resident	Non-Florida Resident
Undergraduate	\$59.43	\$234.27
Graduate, Thesis or Dissertation	\$114.99	\$385.73

Student Fees

Athletic	\$10.00	\$10.00
Health	\$36.00	\$36.00

Registration fees for course audits are the same as the above fees, except that no assessment will be made for the out-of-state portion.

A schedule of registration and tuition fees for all programs is published prior to each semester and can be obtained at the Office of Registration and Records. Since fees often change in the fall semester the above fees should be used for information purposes only. The schedule of classes will contain the most accurate fee information.

Fee Waivers

Students using a fee waiver for part of the fee payment must present the original and the student copy to the Cashier's Office at the time of payment, on or before the last day to pay fees. Students who are responsible for a portion of their fees in addition to the fee waiver will be required to pay their portion before the fee waiver is applied.

University and State employees using the State employee fee waiver to pay their fees must register on or after the day established in the official University calendar for State employee registration. A properly completed and approved waiver form must be presented at the Cashier's Office by the date published for the last day to pay fees. Fee Waivers will be processed only for those courses shown on the approved fee waiver request form presented at the time of registration. A course over-ride card will not be accepted with the tuition waiver program. Only one fee waiver form per employee will be accepted each semester. The State employee fee waiver will not be accepted as

payment for course registrations prior to the announced date for state employee registration. State Employee Fee Waivers do not cover Thesis, Dissertation, Internships, Directed Individual Study, Non Credit Courses, Sponsored Credit Programs, certificate programs, field experience, practicum, closed courses, or courses taken for audit grades.

Senior citizens fee waivers are available to persons 60 years of age or older who meet the requirements of Florida residency as defined in this catalog. The fee waiver allows qualified individuals to attend credit classes on an audit basis. Senior citizens using the fee waiver must register during the first week of classes. Senior citizens using the fee waiver must pay the photo id fee during first term in attendance.

Florida law requires that State employee fee waivers and senior citizen fee waivers be granted on a space available basis only; therefore, individuals using these waivers must comply with the procedures outlined in the schedule of classes for each semester.

Refunds will not be processed for employees who have registered and paid prior to the state employee registration day and wish to use the fee waiver.

Fee Payment

Fees may be paid at the Cashier's Office at University Park, PC 120, or at North Campus ACI 140. Broward students may pay by mail or at the Cashier's Office at University Park or North Campus. Night drop boxes outside the Cashier's Offices are available 24 hours a day for fee payments by check or money order through the last day to pay fees. Payment is also accepted by mail. The University is not responsible for cash left in the night drop or sent through the mail. Failure to pay fees by the established deadlines will cause all courses to be canceled. See *Fee Liability* below.

Late Registration Fee

Students who register after the established deadline for registration will be subject to \$100 late registration fee.

Late Payment Fee

Students who pay fees after the established deadline for payments will be subject to a \$100 late payment fee. If applicable, this fee may be assessed in addition to the late registration fee described in the preceding section.

Florida Prepaid Tuition Plan Students

All students planning to register under the Florida Prepaid Tuition Plan must present their FPTP identification card to the Bursar's Office, PC 115 on the University Park Campus or at the Cashier's Office ACI 140, on the North Campus before the published last day to pay fees. The portion of the student fees not covered by the plan must be paid by the student prior to the published last day to pay fees to avoid cancellation of classes.

Financial Aid Students

All financial aid recipients must come to the Cashier's Office and pay the difference between their financial aid or scholarship awards and their final fee assessment and have their class schedule validated at the Cashier's Office prior to the published last day to pay fees. Failure to have the schedule validated will result in the cancellation of all classes for the semester. The validation process cannot be handled through the night drop or by mail, but must be done in person.

Fee Liability

Students are liable for all fees associated with all courses in which they are registered at the end of the drop/add period. The fee payment deadline is published in the official University calendar. If fees are not paid in full by the published dates, all courses will be canceled and any money paid will be lost.

Registration is not complete until all fees are paid in full.

Reinstatement of Classes

Appeals for reinstatement of registration for classes canceled for fiscal reasons must be filed in writing on the prescribed form with the Cashier's Office by the time specified on the cancellation notice. Each request will be evaluated by the Reinstatement Appeals Committee. Reinstatement will be considered for all classes on the class

schedule at the end of the drop/add period. Reinstatement cannot be requested selectively for certain classes. The decision of the committee is final and all reinstatement activity, including fee payment, must be completed prior to the end of the fourth week of classes. All students whose registration has been reinstated will be assessed a late payment fee. If the late registration fee is applicable it will also be assessed.

Application Fee

A non-refundable fee of \$20 shall accompany each application for admission to the University.

Vehicle Registration Fee

A non-refundable annual or semester vehicle registration fee is applicable to all persons operating or parking a motor vehicle on the University's Campuses. Upon payment of the applicable fee and registration of the vehicle at the Department of Parking and Traffic, each vehicle will be assigned a parking decal which must be permanently affixed to the outside of the vehicle. The decal is required for all vehicles parking on campus. Parking and traffic regulations are strictly enforced.

Other Fees

Library Fines

Per book per library hour	.25
Maximum fine per book	\$5.00
Lost book fine	\$51.15

Note: These fees are subject to change as permitted by law. Additional fees may be added and special purpose fees may be assessed in some instances.

Checks

The University will accept personal checks for amounts due to the University. These checks must be in the exact amount due only. The Cashier's Office will not accept checks above the amount due, third party checks or checks for cash. State law requires that a service fee of \$25 or 5% of the amount of the check (whichever is greater) be assessed on a check returned unpaid by the bank for any reason. Checks returned by the bank can be re-deposited only by cash, cashier's checks, or money orders. A personal check will not be accepted to replace a dishonored check.

Returned checks will be assigned to an agency for collection if not promptly paid. When an account has been assigned the collection

agency fee will be added to the University charges for collection at the current contract rate. Returned checks on student accounts will result in cancellation of classes and will require petition for reinstatement. See reinstatement of classes above.

The Cashier's Office will not accept a check on any student's account which has had two previous dishonored checks.

Refunds

Refunds will be processed and mailed to the address shown on the Registrar's files to all students whose fee accounts show an overpayment after the last day to pay fees. Students due a refund will not be required to submit a refund application to receive their refund. If there is an amount due in the accounts receivable system, that amount will be deducted from any refund due.

Students who have completed registration and have paid all fees due and have completely withdrawn from the University prior to the end of the fourth week of classes are eligible for a refund of 25% of total fees paid.

Any student attending the University for the first time who completely withdraws from all of his/her classes is entitled to a prorated refund up to 60% of the semester. This only applies to first time students.

In the following exceptional circumstances, a full refund of total fees paid will be made upon presentation of the proper documentation:

- Death of a student or immediate family member (parent, spouse, child or sibling). Death certificate required.
- Involuntary call to military service. Copy of orders required.
- Illness of student of such severity or duration to preclude completion of courses. Confirmation by a physician required.

Processing of refunds will begin after the end of the last day to pay fees.

Appeals for tuition refunds must be submitted in writing to the Office of the Registrar within two years after the end of the term for which the refund is requested. There are no exceptions to this policy.

Past Due Accounts

Delinquent accounts are sufficient cause to prohibit registration, graduation, release of transcripts, or release of diplomas.

The University is not able to grant credit or time payments for any fees. Financial aid is available to those qualifying through the Financial Aid Office. A limited number of short term loans are available to full time enrolled students who may experience problems in meeting fee payment due dates.

The University reserves the right to assign any past due account to an agency for collection. When an account has been assigned the collection agency fee will be added to the University charges for collection at the current contract rate.

Deadlines

Students are reminded that deadlines are strictly enforced. The University is not able to grant credit or to extend the fee payment period beyond the time set in its official calendar. The University does not have the authority to waive late fees unless it has been determined that the University is primarily responsible for the delinquency or that extraordinary circumstances warrant such waiver. The University has no authority to extend deadlines for individual students beyond those set by the official calendar.

Academic Affairs

The Office of Academic Affairs oversees the planning and administration of the instructional programs of the Colleges and Schools of the University. Matters affecting faculty, curriculum, and the development of undergraduate and graduate degree programs fall within its purview. Consequently, both the Office of Undergraduate Studies and the Office of Graduate Studies report to the Office of Academic Affairs.

This office also supervises academic support programs, such as Information Resource Management, the Libraries, Instructional Media Services, Sponsored Research and Training, FAU/FIU Joint Center for Environmental and Urban Problems, Latin American and Caribbean Center, Institute for Judaic Studies, Institute for Public Policy and Citizenship Studies, The Art Museum, Multilingual-Multicultural Studies Center, Planning and Institutional Research, Southeast Florida Center on Aging, and the Women's Studies Center.

Responsible for all the academic units, the chief academic officer is the Provost and Vice President for Academic Affairs. The Provost and Vice President also serves as liaison to the Florida Board of Regents for academic matters. As a member of the University Executive Staff, the Provost and Vice President leads in the overall academic planning and direction of the University.

(For detailed information on the University's academic Centers and Institutes, refer to the Center and Institute Section.)

Office of Undergraduate Studies

Fernando Gonzalez-Reigosa, Dean
Yvonne Bacarisse, Associate Dean
Glenda Belote, Associate Dean
Joe Wisdom, Associate Dean
William Beesting, Assistant Dean

The Office of Undergraduate Studies is responsible for undergraduate program activities that span more than one academic unit. Included in these activities are the Academic Advising Center, offering advising for freshmen, undecided majors, students changing majors, and non-degree seeking students, and monitoring of Core Curriculum and

General Education requirements; the University Learning Center, providing CLAST counseling and academic preparation, national test administration, and assistance in improving academic skills; the Faculty Scholars and Invitational Scholars awards and the University Honors Program; Academy for Art of Teaching; and ROTC. The office is located in DM 368, University Park, 348-2099; and ACI-180, North Campus, 940-5754.

Office of Graduate Studies

Richard L. Campbell, Dean
Ruben D. Jaen, Associate Director

The Office of Graduate Studies is under the administration of the Dean of Graduate Studies.

The Graduate Dean is assisted by an Associate Director, who has responsibility for all requests for candidacy certification, assists with minority student recruitment and admission, and also assists the Dean of Graduate Studies in other matters.

The Office of Graduate Studies is responsible for: the implementation of the Graduate Student Grievance Policy; the development of and compliance with University graduate policy, procedures, and planning; graduate financial aid distribution; University clientele linkages for development support and productivity.

Academic Deans and Department chairs within academic units have the responsibility for detailed operations of all graduate programs.

The Graduate Dean works with the Graduate Council in the formulation of new graduate policies and procedures. The Graduate Council is a subcommittee of the Faculty Senate and consists of members who also represent their respective colleges/schools on the Council. The Graduate Council reviews curricula changes proposed by academic units and endorsed by the University's Curriculum Committee.

Another committee in the Office of Graduate Studies is the Advisory Committee for Graduate Studies. This Committee makes recommen-

dations to the Graduate Dean on the implementation of graduate policies and procedures on all programs that offer graduate degrees. The Dean of Graduate Studies serves as Chair of this Committee. Generally, the members on this Committee are assistant and associate deans who have responsibility for graduate education in their respective academic units.

Human Research Committee. Dr. Bernard Gerstman, Professor of Physics, Chairs the University Research Council which, among other things, is in charge of making decisions and giving approval to the use of human subjects on projects and research conducted by University professors and students. In addition, the Committee makes recommendations for fostering University wide research productivity.

Graduate students seeking information on general graduate policies and procedures, or instructions on preparing and filing the thesis or dissertation, should contact the Office of Graduate Studies in PC 520, University Park, or call (305) 348-2455 for an appointment. Internet users are invited to visit our web site located at www.fiu.edu/~gradstud.

Information Resource Management (IRM)

Arthur S. Gloster, Chief Information Officer and Vice Provost, Information Resource Management

All computing, telecommunications, library, and instructional media services on all Florida International University campuses are under the direction of the Vice Provost and Chief Information Officer. The five major units of Information Resources are: University Computer Services (UCS), the Southeast Regional Data Center (SERDAC), Telecommunications, the FIU Libraries, and Instructional Media Services (IMS).

University Computer Services (UCS)

University Computer Services (UCS) provides instructional and research computing support to the faculty and students from all FIU academic departments on all campuses. Computer hardware available for student use includes a DEC Alpha 7620

running Open VMS, a Sun 690 MP server, a Sparc 10 and a Sparc 5 all running Solaris, as well as numerous PC and Macintosh microcomputers, X terminals and Unix workstations. Services of interest to students include: introductory seminars and workshops on the most widely used equipment and software; use of e-mail, Internet and the Web; comprehensive documentation libraries; open access X terminal labs, dial-up and direct VMS/Unix access; open microcomputer labs; a computer store in the Graham Center featuring educational discounts; assistance with remote access to University servers; and peer/professional consultation on various computer-related problems within limits defined by academic departments.

In addition to instructional computing support, UCS through its Application Systems and User Services Groups, provides support for the administrative functions of the University, including Admissions, Registration, Financial Aid and Cashiers.

Lab Use: Students are required to have a valid FIU picture ID card to use UCS labs. Occasionally, during the peak periods before midterm and final exams, lab hours are extended to meet increased demand. Nevertheless, users are advised to complete assignments early; time limits may be imposed during periods of high demand. Ethical computing practices are enforced. University Park student labs are located in PC 411, PC 413, PC 414, PC 415, PC 416, PC 419, PC 422, PC 322, BA 150, BA 160, BA 170. The North Campus labs are located in ACI-293, ACI 326, ACI 393, ACI 266. For a recorded message with current student lab hours, call 348-2174. Please direct other University Park inquiries to the staff offices in PC 413A, 348-2568. Please call 919-5589 for information concerning North Campus facilities. For more detailed information, see our home page at: [URL://www.fiu.edu/orgs/irm/ucs](http://www.fiu.edu/orgs/irm/ucs)

Part-time Student Employment:

Each semester, University Computer Services employs over 60 part-time, student user consultants. Although primarily responsible for maintaining a good working environment and flow of users through lab facilities, some consultants work in UCS User Services where they assist in desktop network integration and microcomputer support. They diagnose and resolve system and equipment malfunctions in departments all

across the University. Other students actually teach faculty, staff and peers to use software applications and computer resources. Given daily exposure to an extensive variety of hardware and software and direct training by UCS professional staff, working as a UCS user consultant for several semesters provides excellent job experience and references. Students with better than average interpersonal and computer skills are invited to apply for work and complete an employment application in PC 413A, PC 548, ACI 293 and ACI 295.

Southeast Regional Data Center (SERDAC)

The State University System's Southeast Regional Data Center provides primary academic computing services to Florida International University via an Ethernet network which connects student and faculty workstations to the Data Center's Unix and DEC VMS cluster services.

SERDAC's computers allow convenient access to the Internet. Information on these services may be obtained by calling 348-2700.

SERDAC's word processing facility offers a multitude of services, from the high volume generation of personalized letters and envelopes, to the electronic scanning of most printed materials and color printing. For information concerning this facility, please call 348-3069.

Primary operations and dispatch services for faculty, student, and administrative printout are located in University Park, PC-436. Please call 348-2109 for information concerning this facility.

SERDAC offers personal computer/workstation maintenance to the University community. Currently, the SERDAC Maintenance Facility has been designated as a factory-authorized center for IBM, Dell, Zenith, and Apple personal computers. Please call 348-2117 for information.

Telecommunications

The Department of Telecommunications (DOT) is responsible for administering, planning, designing, operating, installing and maintaining of voice and data communications systems, equipment and networks that serve the University community. In addition, DOT plays an integral part in the design and completion phases of the Univer-

sity's major construction projects and renovations.

The department's voice organization's scope of responsibility includes the planning, managing and development of the University's telephone systems (ESSX at University Park and Rolm at North Campus) including 24-hour Operator service, voice mail, feature customization, move/add/change orders and toll charge accounting. Through the data communications and network management services, DOT maintains several intercampus data communications networks and operates the University's modem pool for access to FIUnet and the Internet. These services provide users access to all networked University computing resources and gateways to statewide, national and international telecommunications networks. Also, besides day-to-day repair and installation of data communications equipment and cabling, the Department supervises the comprehensive design of communications systems and wiring for any new construction and facility renovations at the University.

Libraries

The University Libraries are housed in the Athenaeum (AT) at University Park, and in a new Library building (LIB) on the North Campus.

The total library collection comprises more than 1,150,000 volumes, in addition to substantial holdings of federal, state, local, and international documents; maps; microforms; music scores; newspapers; institutional archives; and curriculum materials. The Library subscribes to 8,650 scholarly journals and other serials.

A computerized catalog of library holdings provides a listing of materials in both FIU Libraries, and other libraries in the State University System and throughout the world. The bulk of the collection is housed in open stacks.

Classification of library resources is according to the Library of Congress system, except for some of the documents and special collections (e.g., U.S., Florida, and U.N. documents, archives, etc.) which are arranged by their own classification systems and have separate public catalogs.

In keeping with the University's commitment to day and night operation, the libraries are open when the University is in session and during vacation periods. For exact library hours, please consult the posted

schedules or LUIS, the library's online catalog or the library home page. Staff members are always available at the Public Service desks to assist students and faculty in their use of the library.

Consortium Library Privileges

Currently registered students, faculty, and staff may use the libraries of any of the other campuses of the State University System. For access to libraries in the southeast Florida region, students, faculty and staff should check at the circulation desk concerning SEFLIN library privileges.

A state-of-the-art system of interlibrary loan links the libraries with others throughout North America. It includes the use of telefacsimile for time-critical requests.

Instructional Media Services

Instructional Media Services specializes in the development, production, and utilization of various types of audiovisual and communication media for educational purposes. The services offered are listed below.

The Centers for Instructional Technology are do-it-yourself media and graphic arts production centers, providing technical assistance to faculty, staff and students in the creation of visual aids such as slides, overheads, flyers, posters and charts for classroom presentations, papers or projects. Professional help and instruction is available on the premises in the use of Macintosh computers, copystand cameras, overhead-makers, laminators, etc. While consumable items such as films, posterboard and transparencies are to be provided by students, there is no fee for either the help provided or the use of the facilities. Multimedia and interactive software development services are available for faculty to use for instructional and/or scholarly presentations. (OE 164 at University Park; LIB-150 at North Campus).

Photography Services provides still photographic support and services to faculty and staff for educational, training and informational purposes. (OE-167 at University Park; services available to all FIU campuses).

Instructional Graphics prepares artwork, graphs, illustrations, charts, slides and posters for faculty and staff. (OE 169 at University Park; serves other campuses through fax and inter-office mail).

Instructional Television (VH-245 at University Park) provides technical, creative and professional services in the production of video and multi-

media programs for instructional, research and general information/training purposes. This area provides a wide range of video services, including: the design and production of educational and training programs; the documentation of classroom guest speakers and special presentations; and programs for individual or group instruction.

Equipped for studio productions or taping at remote locations, post-production facilities may be used to produce a finished edited program. In the field of distance learning, the department will provide the means of transmitting live interactive classes to remote locations. Five electronic classrooms (two at University Park, two at the North Campus, and one at FIU's Broward Campus) offer faculty the opportunity to expand the walls of the traditional classroom to reach students throughout South Florida.

The department also arranges for satellite teleconferences (both uplink and downlink), schedules and maintains video conference equipment on both campuses to allow two-way audio and video for classes, meetings and conferences, and assists in interactive video projects. Available to faculty and staff only.

Equipment Distribution and Scheduling provides a large variety of educational audiovisual equipment for use by faculty and staff. Services are available to students for classroom use and when sponsored by professors. (PC-236 at University Park; ACI-193 at North Campus).

Other services available are consultation on the purchase, rental, and installation of audiovisual equipment; and professional guidance on a wide range of audio-visual instructional topics and technology. For more information, contact 348-2811, OE 165, University Park; or 919-5929, LIB-150, North Campus.

Consortium Media Privileges

Faculty, staff and students can use the audiovisual services on any campus of the Consortium. AV materials and equipment cannot be borrowed.

International Studies

Mark B. Rosenberg, Vice Provost for International Studies

Giselle De Bruno Jamison, Assistant Director for International Studies

The Office of International Studies (OIS) is responsible for the development and coordination of international programs and activities at the University. OIS staff members work with students and faculty who are interested in participating in international exchange, study abroad programs, and other international academic opportunities. OIS develops agreements with foreign universities to extend the range of opportunities for students and faculty. In addition, the office advises students and faculty on the availability of Fulbright Grants, and manages other international scholarship programs such as, the Latin American and Caribbean Basin Scholarship and the African and Afro-Caribbean Scholarship.

OIS facilitates the University's interaction with local and international interest groups, serves as a liaison with universities and visitors from abroad, and promotes the international mission of the university. For more information on the services offered by OIS, contact Giselle De Bruno Jamison, (305)348-2894, e-mail: debrunog@fiu.edu.

The Office of International Studies also houses the Asian Studies Program. This program coordinates all international activities related to Asia within Florida International University. The staff work with students, as well as with faculty, who are interested in exchange, research, scholarship and fellowship opportunities at universities in China, Japan, South Korea, Taiwan, Singapore, Malaysia, Indonesia, India and Pakistan as well as other Asian countries. This Office provides information regarding projected undergraduate as well as graduate certificate programs in Asian Studies, intended to offer a competitive advantage to interested students. Staff members plan seminars, workshops and cultural showcases which focus upon selected Asian countries, in order to enrich the range of extracurricular educational experiences available to students. The Asian Studies Program interacts with all business, community, faculty and student groups who wish to contribute toward the further development of FIU's newest regional studies program, while col-

lecting and disseminating information about the Asian-related activities and achievements of faculty and students. Located in PC 538, University Park. (305) 348-1914; Fax (305) 348-6586.

International Student Exchange Programs

International Student Exchange (ISE) Programs provide students with the opportunity to study abroad (during one or two semesters) at one of the various universities that has an agreement with Florida International University (FIU). Full credit is given for work satisfactorily completed during the exchange program - as long as it has been pre-approved by an advisor. ISE offers the opportunity to live abroad, explore other languages and cultures, and become acquainted with new friends from all over the world. Students will be required to pay their normal FIU tuition, insurance, housing, and travel arrangements.

In order to participate in ISE, a student must be enrolled at FIU and have a 3.5 cumulative GPA. Limited financial assistance may be available. For further information, contact the Office of International Studies, University Park, DM 353, Miami, Florida 33199, (305) 348-2894, or e-mail: debrunog@fiu.edu.

Institutional Research and Academic Planning

Sushil Gupta, Vice Provost
David Hall, Assistant Director
Maria Perez, Assistant Director

The Office of Institutional Research and Academic Planning provides statistical information to support decision making process within all academic and administrative units of Florida International University, the faculty senate and different committees within FIU, the Board of Regents, state and federal agencies, and professional and private organizations.

The Office of Institutional Research and Academic Planning is known as the official source of University statistics. This office publishes research reports that provide statistical information about the university on a regular basis. Institutional Research and Academic Planning also provides information requested by the University community on an ad hoc basis. This office coordinates

the collection of data, preparation of reports and files, and their submission to the Board of Regents. The coordination and submission of questionnaires and surveys from outside sources is also done by this office. All questionnaires or surveys developed by faculty or staff which are designed to collect data about the operations of the University, students or employees must be coordinated through this office. For more information about this office and its services, call (305) 348-2731.

Sponsored Research and Training

Thomas A. Breslin, Acting Vice President

Catherine F. Thurman, Director

The Division of Sponsored Research and Training serves the research and training needs of interested faculty by providing timely information on the availability of local, state, and federal program support. The attraction of these funds to the campus provides an opportunity to better serve the needs of the people of Florida through services not regularly funded by the Legislature.

Among the major goals of the Division of Sponsored Research and Training are the following: to help stimulate faculty and staff interest in research and training projects; to assist the faculty and staff in obtaining funds for research and training projects; and to provide technical assistance to faculty and staff who manage contract and grant programs for the University. For more information, contact 348-2494.

The Art Museum

The Art Museum at Florida International University has served the South Florida community for the last 19 years presenting exhibition and art lectures of local, national and international importance. Exhibitions include student shows, self-curated exhibitions from both the University's collections and from institutions and organizations outside the University, and national travelling shows. The Art Museum is supported by the University community, local, state and federal agencies and Friends of the Art Museum.

The Art Museum serves Miami's multi-cultural community year round, free of charge. The Museum

is home to Coral Gables' Metropolitan Museum and Art Center Collection, The Cintas Foundation of Contemporary Hispanic Art, a permanent collection of works by North and South American and Florida artists, and the site of the Martin Z. Margulies Family Collection. One of the world's most important international outdoor sculpture collections, includes works by Calder, De Kooning, Miro, Nevelson, Serra, and other well-known artists.

The Art Museum provides a unique experience to a very broad audience including children, students, teachers, senior citizens, minorities and the disabled. Besides serving two campuses and two centers, its programs extend to surrounding counties outside of Dade including Broward, Palm Beach and Monroe Counties.

The Art Museum has been recognized for its excellence by the grants it has received, most recently the National Endowment for the Arts; The Institute for Museum Services; The National Endowment for Humanities; The Florida Endowment for the Humanities; The Dade County Council of Arts and Sciences; The Metropolitan-Dade County Cultural Affairs Council and the Florida Arts Council.

The Art Museum, which occupies a 5,000 square foot area on the University Park campus, opened with an internationally acclaimed exhibition, *Contemporary Latin American Drawings*, in April, 1977. Since then, many important exhibitions have been presented, including: *Alberto Giacometti, Draftsman and Sculptor*; *Mira, Mira, Mira: Los Cubanos de Miami*; *Adolph Gottlieb: Paintings and Works on Paper*; *Marcel Duchamp; Louise Bourgeois*; *The Phillips Collection in the Making: 1920 - 1930*; *Imagenes Liricas: New Spanish Visions*; *CUBA-USA: The First Generation*; *Antoni Tapies In Print*; *Agustín Fernández: A Retrospective*; *Miro/Noguchi*; and the annual *American Art Today* series featuring contemporary artists exploring traditional themes including *Still Life*, *The Figure in the Landscape*, *The Portrait*, *Narrative Painting*, *The City Surface Tension*, *Clothing as Metaphor* and *Images from Abroad*.

The Art Museum has continued to enhance its exhibitions with the *Critics' Lecture Series*, which has included many of the exhibiting artists, scholars, museum curators and art historians, including: Susan Sontag, Robert Hughes, Hilton Kramer,

Michael Graves, Peter Plagens, Tom Wolfe, Germaine Greer, Dore Ashton, Carlos Fuentes, Michael Brenson, Frank Stella, Richard Serra, Helen Frankenthaler, Kirk Varnedoe, David Ross, Michael Kimmelman, and Anne d'Harnoncourt.

The Museum is operated by the Director, the Assistant Director, the Office Manager, the Registrar/Preparator, the Community Relations/Education Coordinator, and the Program Assistant plus a staff made up partially of University students working through an internship program.

Business and Finance

The Division of Business & Finance comprises the offices of Auxiliary Services, Parking and Traffic, Budget Planning, Controllers, Environmental Health and Safety, Equal Opportunity Programs, Facilities Management, Human Resources, North Campus Business and Finance and Office of Continuous Improvement, Office of General Counsel, Office of the Inspector General, Public Safety and Purchasing.

Auxiliary Services

Auxiliary Services supervises the bookstore and food services operations on both University Park and the North Campus, which includes the Cafeteria, Gracie's Grill and all vending operations.

Auxiliary Services also oversees the operations of Duplicating Services, which includes a Print Shop, Convenience Copiers and a Total Copy Reproduction Center.

A recent addition to the Auxiliary Services portfolio is Parking and Traffic Services, which is a unit that enforces all University Parking and Traffic Rules and Regulations.

Controller's Office

This area is primarily responsible for maintaining accounting records, controlling budgets, coordinating financial activities and reporting on financial data. Typical functions of the Controller's Office are the payment of invoices to vendors, collection of fees and other revenues, contract and grant accounting, payroll, disbursement and collection of student loans and the reconciliation of accounting ledgers.

The Controller's Office is a service oriented unit assisting the University community in most aspects of financial operations. Questions concerning the use of State funds, internal control procedures or methods to pay a vendor or employee are normally addressed to this unit. Guidance is provided to travelers pertaining to the State requirements for the reimbursement of traveling expenses. Assistance is provided to employees in the interpretation of accounting ledgers and fiscal reports.

The following sections operate within the Controller's Office: General Accounting, Accounts Payable, Travel, Construction and Property, Accounting, Contracts and Grants, Disbursement, Student Loan and Accounts Receivable, Payroll, and the Cashier's Office at all campuses.

Environmental Health and Safety

The Department of Environmental Health & Safety & Risk Management Services provides the leadership and direction necessary to assure identification, implementation and effective administration of programs designed to promote hazard recognition, avoidance, reporting and control, as well as compliance with various federal, state and local safety regulations.

In addition to programs necessary for regulatory compliance, the department takes a proactive approach on many issues. Among the programs and activities managed by the department are: Investigation and initial processing of liability claims against the University; review of risk management concerns related to special events planned by student organizations and University employees and presentations to student groups; and Indoor air quality investigations.

The primary component of the department's mission is service. This mission is accomplished by working in close coordination and cooperation with other departments, and the University community in general. At University Park, the department is located at CP 183, 348-2621/2262. Services are provided at the North Campus from the Facilities Operations complex, 501 115, 919-5225.

Equal Opportunity Programs

This office provides leadership and direction in the administration of the University equalization programs for women and minorities in several ways. It prepares the University's annual Affirmative Action Plan and the State Equity Accountability Plan, assists University units in implementing and monitoring affirmative action

procedures; provides oversight to the University Diversity Program; provides a channel for employee and student grievances regarding discrimination, or issues indicating a need for additional affirmative actions; administers implementation of the Policy to prohibit Sexual Harassment; coordinates University compliance with the Americans with Disabilities Act and with Title IX of the Education Amendments of 1972, and promotes effective relationships between the University and community organizations. Equal Opportunity Programs also administers the State University Systems scholarship programs funded for the purpose of increasing minority enrollment. In addition, the Office maintains a liaison relationship with State and Federal agencies dealing with EEO and affirmative action. The Office is located at University Park, PC 215.

Americans with Disabilities Act (ADA)

The Assistant Vice President for Equal Opportunity Programs is the University's ADA Coordinator, and has responsibility for ensuring access to employment, academic and public programs for persons with disabilities. The Office administers a central budget used to fund the costs of reasonable accommodations for University employees and applicants for employment. The office also works closely with the Office of Disability Services for Students in the provision of auxiliary aids and services to ensure access to academic programs, and with all University offices in the provision of access to University public events.

HIV/AIDS Policy

Students and employees of the University who may become infected with the HIV/AIDS virus will not be excluded from enrollment of employment or restricted in their access to University services or facilities unless individual medically-based judgments establish that exclusion or restriction is necessary to the welfare of the individual or of other members of the University community. The University has established an HIV/AIDS Committee which includes representatives from major University divisions and other staff as appropriate. The Committee, which

meets regularly, is responsible for monitoring developments with regard to HIV/AIDS, acting upon and administering the University's Policy on HIV/AIDS in specific cases, and coordinating the University's efforts in educating the University community on the nature of the disease. In addition, the Committee will meet as needed to consider individual occurrences of the disease which require University action.

Persons who know or suspect they are sero-positive are expected to seek expert medical advice and are obligated, ethically and legally, to conduct themselves responsibly for the protection of others.

The University has designated HIV/AIDS counselors who are available to provide further information on this subject. Contact one of the following offices at University Park, Assistant Vice President for Equal Opportunity Programs, PC 215; Counseling Services, GC 340; and Student Health Services, OE 115. North Campus contact, Counseling Services, SC 261 or the Student Health Clinic, TC 110.

Sexual Harassment Nondiscrimination Educational Equity

All members of the University Community are entitled to study and work in an atmosphere free from illegal discrimination. Florida International University's equal opportunity prohibits discrimination against students and employees on the basis of their race, color, creed, age, disability, sex (including sexual harassment), religion, marital status, or national origin. Under the policies, it does not matter whether the discrimination was intended or not; the focus is on whether students or employees have been treated differently or subjected to intimidation, or a hostile or offensive environment as a result of their belonging to a protected class or having a protected status. Illegal sexual harassment includes unwelcomed physical contact of a sexual nature, overt or implied threats to induce performance of sexual favors, verbal harassment, use of sexually suggestive terms, or display or posting of sexually offensive pictures.

Any employee, applicant, or student who believes that he or she may be a victim of unlawful discrimination, may file a complaint with the Office of Equal Opportunity Programs, PC 215 at University Park

(348-2785) in accordance with this procedure.

Facilities Management

Facilities Management provides professional support to planning, designing, construction, maintenance, and operations of facilities on all campuses, to accommodate all aspects of the University mission as defined in the Campus Master Plan. This department is separated into three major areas of supervision which are Facilities Development, Facilities Operations and Utilities Support Services.

Facilities Development is responsible for all design and construction projects. These activities include building programs, design coordination, construction administration and occupancy coordination.

Facilities Operations is responsible for the operations and logistics of physical resources including building and grounds maintenance, custodial, landscaping, roads and parking lots.

For routine and emergency maintenance services, please contact the Customer Service Center at 348-4600 at University Park and 919-5700 at North Campus.

Utilities Support Services oversees the University's utility systems including air conditioning, water, sewage, electrical power and solid waste management. In addition, Utilities Support Services works together with Environmental Health & Safety to assure that all toxic (biological or chemical) wastes are disposed of properly.

Human Resources

The Office of Human Resources provides human resource management services for staff members and employees of all academic and administrative departments including student employees, research or graduate assistants, college work study and OPS employees on all campuses. All services provided by the office are in compliance with applicable federal and state regulations, and include six major human resources areas - Employment and Recruitment, Compensation and Pay, Employee Benefits, Personnel Records, Employee Assistance and Labor Relations.

In addition to the above mentioned human resource manage-

ment areas, the Office of Human Resources is responsible for the Volunteer Program, and the Presidential Holiday Affair.

The University Park office is located in PC 224, 348-2181; the North Campus office is located at 322-A Library Building, 919-5545.

Office of the General Counsel

The Office of the General Counsel provides legal services to the University. The General Counsel provides representation and advice to the University administration (and as appropriate faculty and staff) concerning legal issues affecting the University. The General Counsel retains and oversees outside counsel as needed and serves as liaison with the Office of the Attorney General, the General Counsel to the Board of Regents, and with other State agencies providing legal services to the University.

Office of the Inspector General

The Office of the Inspector General assists all levels of management in accomplishing their goals and objectives by furnishing them with independent appraisals, recommendations and pertinent comments concerning the activities reviewed. The independent appraisal activity includes evaluation of financial results, legal compliance, program results, economy and efficiency, and internal accounting control procedures.

In addition, the office of Inspector General conducts investigations of suspected fraudulent or other dishonest acts. It is also the official contact for employees to report allegations under the Whistle-Blowers Act.

Public Safety

Public Safety is a full service law enforcement organization dedicated to assuring an environment conducive to living and learning in a University community. The department's members include Law Enforcement Officers who are fully certified and sworn, and have full police authority to enforce state, local and University regulations.

Purchasing Services

Purchasing Services is organized to support the students, the instructional and research efforts of the faculty, staff, and all University departments. Purchasing involves the acquisition of equipment, furnishings, supplies, construction services, preventive maintenance services, contractual services, and lease of space for the University.

Purchasing Services is responsible for a number of functions in addition to the primary function of centralized university purchasing. These other functions include Central Stores, Central Receiving, Property Control, Surplus Property and Campus Mail.

The office is located at University Park, PC 519 and can be reached at 348-2161.

Office of Continuous Improvement (OCI)

The Office of Continuous Improvement (OCI) is responsible for a variety of programs and services, including employee professional development programs.

Reengineering of Services and Programs. OCI works with management and staff of various University departments to assist in improving efficiency, work environment, and customer satisfaction.

OCI consults with various entities within the University and coordinates their input into creating improved services and programs. Some of these services and programs are the A&P (Administrative and Professional) Employee Performance Appraisal Program, the University's Awards Program, the University's Suggestion Program, diversity initiatives, and strategic planning for the Division of Business and Finance.

In addition to these programs and services, OCI is responsible for employee professional development programs. In this capacity, OCI offers a variety of training and career development programs for University staff. These programs are carefully designed and planned to cover relevant and timely topics. Program length and presentation techniques vary according to the objectives of each course, although time for exercises, practice feedback, and questions is always provided. Programs being offered are

circulated each quarter via the newsletter for Business and Finance and/or a special employee professional development/training flyer.

Training programs can be scheduled for individual departments upon request.

The Career Development Program (the 'Passport' Program) is targeted for specific employee groups (office professionals, tradespeople, and custodial employees), and is designed to enhance professional growth and provide promotional opportunities for participants who complete the program. Call 899-3031 for more information about employee professional development programs.

The OCI also provides internal consulting services in organizational development/transformation and instructional design.

Newsletter and Publications for the Division of Business and Finance. The OCI publishes the division's monthly newsletter as well as coordinates publication of the division's annual report. The location of the Office is ECS 442. Call 348-6090 for more information.

University Budget and Planning

University Budget and Planning is responsible for the development of all operating budgets in all budget entities, including capital programs, legislative budget requests, operating budget requests and internal operating budget plan. The office also has responsibility for University planning, including strategic planning. The office is staffed by a director, a secretary and three professional staff.

North Campus and Enrollment Services

North Campus

The North Campus of Florida International University educates more than 8100 students on 200 acres on Biscayne Bay. Academic programs in Hospitality Management, Journalism and Mass Communication, Nursing, and Urban and Public Affairs are headquartered on the North Campus. In addition, degree programs in Arts and Sciences, Business Administration, Education, and Health are offered on the North Campus.

North Campus is the hub for FIU's community outreach efforts. It serves as the host campus to the Elders Institute, the HRS/Children and Families Professional Development Centre, the Institute of Government, the Institute for Public Opinion Research, the Roz and Cal Kovens Conference Center, and the Southeast Florida Center on Aging.

Students may apply for admission and financial aid, register for classes and receive academic advising at North Campus. The North Campus Library occupies 57,000 square feet and has a seating capacity for 600. It is a Federal Government Document Depository and a Florida State Government Document Depository. The Library has its own local area network for CD-ROMS and serves as the locus for the FIU Libraries PantherNet, a prototype remote dial-in system that allows telephone access to CD-ROMs, electronic journals, electronic reserves, library publications and provides support for Distance Learning.

Apartment-style residential housing on North Campus accommodates 552 students. Student life is enhanced through the provision of programs and services offered in the Wolfe University Center, the focal point of social and cultural interaction out of the classroom. The Wolfe Center houses the cafeteria, University Bookstore, Student Government offices, an Olympic-size pool, computer lab, vending machines, automatic banking facilities, a post office, a 300-seat theater, meeting rooms, a ballroom and game room. Student development programs in Recreational Sports, Career Services, Disability Services, International Student Services, Minority Student Services, Orientation, Student Activities, Student

Counseling, Student Health and Wellness, Victim Advocacy, the Volunteer Action Center and the Women's Center are also provided on the North Campus.

The North Campus is administered by the Office of the Vice President of North Campus and Enrollment Services. The office is on the Third Floor of the Library. Representatives from the Divisions of Academic Affairs, Business and Finance, Student Affairs and University Relations are also found there. Liaisons with personnel in other Divisions and at University Park are coordinated through North Campus Administration and Operations, (305) 919-5490.

Office of Admissions

The Office of Admissions is responsible for the recruitment and admission of undergraduate applicants. Staff provides information to prospective students, guidance counselors and the general public to inform them of the academic and other educational programs offered by the University. The department also collects and processes official application materials for all graduate admissions. For specific information on the application process and requirements for admission please refer to the General Information section of this catalog.

Location: PC 140, University Park, 348-2363; ACI 160, North Campus, 919-5760; Trailers, Broward Program, 475-4150.

Office of Community College Relations

The Office of Community College Relations has the primary responsibility for inter- and intra-institution relations with Florida's community colleges. Staff members provide information to prospective transfer students, community college staff and administrators to continually inform and update them regarding academic programs, transfer scholarships and other relevant information.

Office of Financial Aid

The Office of Financial Aid is responsible for the administration of financial aid programs that assist students in their pursuit of a higher education. Financial Aid includes scholarships, grants, loans and employment. Financial assistance based on need is determined on an individual basis using a standard formula provided by the U.S. Department of Education. For specific information on types of assistance, eligibility criteria, application procedures and other requirements, please refer to the General Information section of this catalog.

Location: PC 125, University Park, ACI-100, North Campus, 348-1500.

Office of the Registrar

The Office of the Registrar is responsible for coordinating the University registration activities, including off-campus course registration, and establishing, maintaining and releasing students' academic records. The office is also responsible for Space and Scheduling, Veteran's Affairs, and Graduation.

The Office of the Registrar staff has the responsibility to assist the student, faculty, other administrative offices, and the general public; to hold safe and preserve the confidentiality of the student's records; and to ensure the integrity of the University's policies and regulations.

Enrollment Support Services, a division of the Office of Registrar, manages the Division's computerized student records database, the University's degree audit (SASS), Records Archiving, and computer-related programs. This unit also provides computer system planning support to academic units and other departments in the University. The University Catalog and the Course Schedule booklet published each semester are produced in this unit.

Location: PC 130, University Park, 348-2383; ACI 100 North Campus, 940-5750; Broward Program, 475-4150.

University Advancement and Student Affairs

The Division of University Advancement and Student Affairs is responsible for the operation of all University programs relating to institutional advancement and Student Affairs

University Advancement

University Advancement is responsible for the operation of all University programs relating to institutional advancement. Activities are centered in two departments:

Alumni Affairs

The Office of Alumni Affairs seeks to maintain contact and encourage communication with and participation in special events with the more than 68,000 FIU alumni of record. Alumni participation is stimulated through activities by the FIU Alumni Association and through programs sponsored by this office, including publications, alumni social events, collegiate marketing projects and alumni benefits.

Development

The Development Office coordinates the University's efforts to raise funds in support of the University and its programs from alumni and other individuals, corporations, foundations, and other private sector organizations. The Office develops and implements numerous programs to raise funds annually from alumni and others through the Fund for FIU, and works closely with the Board of Trustees of the FIU Foundation and other volunteers to increase private support for the University and its students.

The Vice President for University Advancement serves as the principal University liaison to the Board of Trustees of the FIU Foundation, Inc., a group of leading South Florida business and community leaders dedicated to securing community support and private funds for the University.

Student Affairs

Student Affairs seeks to educate a diverse body of students by supporting their personal and academic growth. We promote cross-cultural outreach and understanding, create an environment which fosters the development of the 'whole' student, promote cultural learning and pluralism, provide programs and services which enhance intellectual, social cultural, physical, emotional, and spiritual development, support civic awareness and service learning, and prepare students to become contributing members of the community.

The following are Student Affairs departments and programs:

Campus Ministry

The Interfaith Campus Ministry serves student groups involved in a variety of activities. Professional representatives from various faiths are available for personal appointments. Individual denominations sponsor campus-wide programs including worship, study groups, social gatherings, and cultural events. Campus Ministry sponsors programs and activities which are non-denominational.

Location: GC 340, University Park, 348-2215; SC 265, North Campus, 940-5609, or 940-5610, and 956-5247.

Career Services

Career Services is user friendly and assists students with information about majors, jobs, and careers. To help students in these areas, Career Services (CS) has four programs: Career Advisement, Career Mentoring, Career Placement, and Experiential Education (Co-op, Internships and career related volunteer work).

CS is highly automated to provide students and alumni with up-to-date information regarding the World of Work and networking opportunities. The offices have a 24-hour Golden Panther Jobline which offers students and alumni an opportunity to listen to employers describe actual job vacancy announcements. For students who register with CS, there is a resume referral system which automatically refers students' resumes to

interested employers; and a Phone-Master system which calls students at home with specific career-related information. Registered students also have opportunities to sign up with employers interviewing on campus from any computer lab. A videoconferencing interactive video interviewing system is available for students to interview with employers unable to visit the University.

CS offers numerous workshops and seminars, networking forums Career Fairs, and Low/Graduate School days. The Office houses a comprehensive Career Library, an interactive www homepage and provides evening hours at University Park.

Location: GC 230, University Park, 348-2423; WUC 255, North Campus, 919-5560 and University Center at Davie, 474-1404.

Disability Services for Students

Disability Services for Students provides information and assistance to students with disabilities who are in need of special accommodations. Individual services are available to students with visual, hearing, speech, physical, and learning disabilities, chronic health problems, psychological disorders, and temporary disabilities. Services include counseling, classroom accommodations, adapted equipment, note-takers, readers, interpreters, adapted testing, priority registration, and referrals. Support and assistance in overcoming architectural, academic, attitudinal, and other barriers encountered is provided. Requests for services must be made prior to the beginning of each semester and current documentation of disability is required to receive services.

Location: GC 190, University Park, 348-3532; Wolfe Student Center 139, North Campus, 919-5305; Bldg. 9, Room 224, Broward Program, 948-6793; TTY/TDD 348-3852.

Greek Organizations

Greek organizations contribute to the University by promoting leadership, scholarship, service, social activities and brotherhood and sisterhood. There are ten fraternities and eight sororities coordinated by a Greek Advisory Board. An interfraternity Council governs fraternities and a Panhellenic Council governs sororities. There is a National Pan-Hellenic Council governing body for historically black fraternities/sororities and an Order of Omega, an honorary and leadership society that promotes scholarship among Greeks. A formal rush period is held in the Fall semester, and an informal rush is held during the Spring term.

Location: GC 316, University Park, 348-1293.

International Student and Scholar Services

International Student and Scholar Services provides assistance on matters regarding immigration regulations and procedures related to non-immigrant legal status. The staff provides counseling and advisement on academic, personal and financial concerns, and serves as a liaison to academic and administrative departments throughout the University. An orientation program is offered each semester as well as international and inter-cultural programs to assist students in adapting more effectively to the University community and to living in Miami.

An active International Student Club on each campus collaborates with the department in organizing various social activities. Club programs enable students to participate in the international dimension of the University and provide opportunities for involvement in the greater Miami educational community.

Location: GC 217, University Park, 348-2421; WUC 255, North Campus, 919-5813.

Minority Student Services

Minority Student Services provides minority students with personal, academic, social, and cultural support needed for the achievement of educational goals. Staff provides orientation, leadership development, counseling, career and academic

advisement, financial assistance and tutorials; and serves as a liaison to academic units and student support services university-wide. This department also collaborates with student groups in coordinating traditional cultural celebrations, and other activities for minority students' physical, mental and social well-being.

Location: GC 216, University Park, 348-2436; WUC, 253, North Campus, 919-5817.

Office of the Ombudsman

The University Student Ombudsman Office was established by the University President pursuant to Section 240.2098 Florida Statutes. The Ombudsman Office acts as an impartial and confidential forum to assist students who have encountered problems or conflicts at the University, particularly problems or concerns not adequately addressed through normal channels. This may include correcting processes or procedures, which are incapable of resolving the issue, or are causing an inordinate delay. The Ombudsman may resolve problems through various methods, including investigation, mediation, or making referrals to the appropriate University department for review. The Ombudsman should be utilized in situations where all areas of appeal have been exhausted or proven unsuccessful.

For more information or services, please contact the Office of the Ombudsman at 348-2797 located in Graham Center 219.

Orientation

Panther Preview, FIU's Orientation program, is designed to introduce students and parents to Florida International University. Orientation sessions are scheduled prior to the Fall and Spring terms. The mandatory two-day program for freshmen includes placement testing, advising, question and answer sessions, and a taste of campus life. The one-day parent program introduces parents to FIU, as well as assists them in preparing for the challenges and changes of parenting a college student. Transfer students are strongly encouraged to attend a half-day Orientation that includes advising, question and answer sessions, and a campus tour. Information about Ori-

entation and related services is mailed to newly admitted undergraduate students prior to the first term of enrollment.

Location: GC 340, University Park, 348-3828; WUC 363, North Campus, 919-5804.

Pre-collegiate Programs

Pre-collegiate Programs provides academic enrichment, career planning and scholarship opportunities to promising minority students at the high school level. Pre-collegiate programs also expose high school students to the university environment and facilitate their transition to college.

Location: GC 216, University Park, 348-2436.

Student Activities

Student Activities provides learning opportunities for students to practice and develop leadership; communication, problem-solving, program planning, organization, implementation, and evaluation skills. Activities are co-curricular and cover all aspects of the educational experience. Over 150 registered student organizations exist to enrich campus life and contribute to the social, cultural, and academic growth of students. Students may organize additional groups that promote the University's educational mission.

Student Activities is also responsible for new student Orientation, Student Handbook, Student Government Association, Student Organizations Council, Student Programming Council, the Volunteer Action Center, Greek organizations, and student media.

Location: GC 340, University Park, 348-2137; WUC 363, North Campus, 919-5804; LA building, room 203, Davie, 236-1518; University Tower, room 305, Broward, 355-5279.

Student Counseling Center

The Student Counseling Center focuses on enhancing the emotional and cognitive well-being of students. The following services are provided: 1) individual, couple and group counseling for problems associated with anxiety, depression, in-

terpersonal relationships, coping skills and self esteem; 2) relaxation techniques and biofeedback training; 3) psychological testing when appropriate; 4) educational workshops on mental health and wellness issues.

The Student Counseling Center also offers a structured, supervised training program for graduate level students who are specializing in the mental health field.

The Student Counseling Center is staffed by licensed psychologists and mental health counselors with expertise in dealing with student concerns and development. All services are provided to students free of charge. Complete confidentiality is assured.

Location: GC 211, University Park, 348-2434; HM 110, North Campus, 919-5313.

Student Government Association

The Student Government Association (SGA) is comprised of representatives from all Schools and Colleges who are elected by the student body. There is a Student Government Council at both North Campus and University Park. SGA appropriates an annual budget generated by the Activity and Service fee which is paid by all students at the time of registration. Bills, appropriations, and resolutions come before the SGA for discussion, support, funding, or other action on matters related to various activities, issues, or causes.

SGA members represent the student body on university-wide committees and task forces to ensure student representation at the administrative level. Students are encouraged to become involved in all aspects of Student Government.

Location: GC 311, University Park, 348-2121; WUC 363, North Campus, 919-5680; LA building, room 203, Davis, 236-1518. University Tower, room 506, Broward, 355-5279.

Student Health Services

The Student Health Service provides affordable, quality & professional primary health care for routine, non-emergency illness and injuries. The department promotes health education, wellness programs, and preventive medicine. The Health Center stimulates student aware-

ness of holistic health behaviors which may be integrated into lifestyle practices to maintain optimal physical and mental health.

Medical services include routine office visits; physical examinations; family planning; HIV testing; immunizations; laboratory testing; limited pharmacy services; nutrition counseling; exercise testing; and private consultations with a physician or nurse practitioner. Referrals are made to local hospitals, pharmacies, and physicians for services not provided at the Health Clinic. Appointments are required. In case of an emergency on campus, Public Safety should be immediately called 24 hours a day.

Office visits are free to students who present an FIU identification card valid for the current semester. Laboratory, immunizations, and pharmacy services are provided for a nominal fee. In addition, the student is responsible for the cost of all services rendered at off-campus medical facilities. Therefore, the University strongly recommends that all students have adequate health insurance coverage. Brochures describing low group-rate health insurance coverage exclusively for students may be obtained at the student Health Center on both campuses.

Students may participate in many health educational programs that stress proactive prevention, including Student Health Advocates of Peer Education (SHAPE), and the Student Health Advisory Council (SHAC), fitness testing, EMPOWER motivational diet groups, running/walking club, AIDS peer educators, and many others.

The Wellness Center features a library of health educational resources including textbooks, journals, audiotapes, videotapes, computer interactive software programs, CD-ROM programs, and laser videodiscs. All of these resources are available for student, faculty and staff use within the Wellness media room, upon presentation of a valid FIU I.D.

Please see the Student Handbook for more detailed information on Student Health Services.

Location: Student Health & Wellness Center;

University Park

Appointments and Information	348-2401
Administration	348-3080
Immunization	348-2688

Health Education/Wellness Center	348-4020
North Campus	
Appointments	919-5620
Immunization	919-5675
Wellness Center	919-5307

Student Judicial and Mediation Services

The Office of Student Judicial and Mediation Services ensures that the policies and procedures regarding student rights and responsibilities and the Student Code of Conduct which supports these rights, can be freely exercised by each student without interference by others.

As members of the University community, students are expected to honor and abide by the policies and regulations of the University and the Florida Board of Regents as well as Federal and State laws and local ordinances. The Office of Judicial and Mediation Services provides an educational forum which supports the academic mission of the University, and fosters the personal growth and positive learning experiences of students.

Infringements of an academic nature should be directed to the Office of the Provost. All other complaints that are non-academic should be directed to Judicial and Mediation Services. The University reserves the right to review the case of any student who has been implicated in a criminal offense prior to admission, to determine the student's eligibility for admission and participation in extracurricular activities. See the Student Code of Conduct in this Handbook for more information on Judicial Services.

The "Student Handbook" provides specific information regarding the "Student Code of Conduct". Location: GC 214A, University Park, 348-3939.

University Centers

The University Center on each campus provides direct services to students and the University community. The Graham Center (GC) at University Park and the Wolfe Center (UC) at North Campus are the focal points for the University community to meet and interact in a non-classroom, educational environment. As the hubs of student life, the buildings house the Student Government of-

fices, the 'Beacon' student newspaper. They also offer the services of computer labs, bookstores, cafeterias, grills, vending machines, automatic banking facilities, auditoriums, lounges, meeting rooms, ballrooms, gamerooms and an overnight lodging facility.

The Graham Center houses the radio station (WUFI), TicketMaster, a satellite cashiering office, a food court offering Pollo Tropical, Burger King and coffee shop. The mini-mall offers a credit union, computer store, copy center and travel agency. The North Campus University Center houses a post office, a theater, and parking services.

Both centers also house services provided by the Division of Student Affairs (Career Services, Counseling Services, Disability Services for Students, International Student Services, Minority Student Services, Student Activities, Women's Center and Volunteer Center).

Other services include: lost and found, locker rental, vending refunds, test preparation courses, and Photo I.D. card.

Staff in the centers also coordinate the scheduling of space and assist with the production of student and university-sponsored events.

To better serve the FIU community, the University has committed over \$10 million to renovate and expand both university centers. Expected completion is Fall 1998.

Location: GC 104, University Park 348-2297; UC 124, North Campus, 940-5800.

University Housing

University Housing offers a wide variety of accommodations serving over fifteen hundred students at both the University Park and North Miami campuses. Both furnished apartments, as well as a new state of the art traditional residence hall is available.

The traditional residence hall, Panther Hall, opened in the Fall of 1996. This 410 bed fully furnished residence hall consists of two bedroom suites with a private bath. The residence hall has a computer lab, study lounges, common area lounges, recreation facility, game room, common area kitchens, and laundry rooms.

The apartment style units include bedrooms, kitchens, private or semi-private baths, and basic furnishings.

Apartment styles include studios, efficiencies, one bedrooms, and two bedrooms.

Prices vary depending on the type of unit and campus location, with an average semesterly cost of \$1,375.00. Semester rates include all utilities (electric, local telephone service, cable television, and water.) All housing agreements are issued for the academic year with summer assignments available. A \$100.00 deposit is required at the time of application.

Each residential facility provides easy access to the library, classroom buildings, athletic events, and a variety of on-campus recreational, social, and cultural activities. All facilities are staffed with individuals who are trained and committed to providing the student with a living environment that is supportive of their academic pursuits. University Housing's goal is to challenge each resident to get involved and take advantage of the many out of classroom learning opportunities. Living on campus is a critical part of the college experience.

Furthermore, University Housing serves as a liaison between commuter students searching for housing and community members seeking renters. Current rental listings are available in the Central Housing Office.

Director: Jim Wassenaar; Location: Panther Hall (PH) 126; Phone: 348-4190; Fax: 348-4295; E-mail: housing@fiu.edu; www page: <http://www.fiu.edu/orgs/housing>.

Victim Advocacy Center

The Victim Advocacy Center provides emergency crisis intervention, on-going support, advocacy, and resource referral to students, faculty, staff, and alumni who have been victims of crime or abuse. The Center provides awareness and prevention workshops and educational programs. A resource library is available for student use at the University Park office. All services are free and confidential.

The Victim Advocacy Center deals with, but is not limited to the following types of victimization: sexual violence, relationship abuse, stalking, assault and battery, hate crimes, sexual harassment, and indecent exposure. Support is also available to surviving friends and family of murder victims. Persons who have experienced incidents of

violence, harassment, or abuse are encouraged to seek assistance from the Victim Advocacy Center.

Location: GC 195A, University Park (305) 348-1215; WUC 257, North Campus, (305) 919-5324; Crisis Response Line, 24 hours (305) 348-3000.

Volunteer Action Center

The Volunteer Action Center (VAC) is the central office for community service and volunteer activities on campus. The center encourages students to realize their potential to impact their community and effect social change through the power of service-learning, advocacy and volunteerism. VAC organizes monthly volunteer projects, alternative break programs and serves as a clearing house for volunteer opportunities.

Location: GC 331, University Park, 348-2149.

Women's Center

The Women's Center offers various programs and services related to the intellectual, social and professional growth of women. Through collective efforts, the Center advocates for systematic changes that will improve the lives of women and men. Center programming focuses on the particular needs of women students, and encourages women to learn more about themselves, other women, and the environment in which they live. A Women's Mentoring Program exists to promote the professional and leadership success of women students. All other programs are open to the entire community. Services provided by the Center focus on women, and include, confidential referrals, database of scholarships, library and resource files, and opportunities for internships. Locations: GC 318, University Park, 348-3692 and WUC 257, North Campus, 919-5359.

University Outreach Programs

The mission of University Outreach is to develop and implement quality educational programs and services in partnership with the academic, business, and professional communities. The instructional and academic resources of the University will be extended through innovative approaches including distance learning, alternative scheduling, and community-based academic credit and non-credit programs. State-of-the-art technological capabilities offer a high-quality learning environment through the Kovens Conference Center or at a customer's location. A professional and courteous team is dedicated to the highest standards of customer satisfaction. Local, state, national, and international communities will be served with consistent, cost-effective, high-quality and distinctive programs and services.

University Outreach carries out its mission to extend lifelong learning opportunities to adult and nontraditional students by providing increased access to University programs. Courses of instruction are developed and offered in a variety of formats. These include professional development seminars, short courses, workshops, lecture series, and career training.

Academic Credit Programs

Degree programs and courses for academic credit are scheduled to meet student needs by offering them at times and locations that will increase learning opportunities. More than 200 courses for academic credit are offered annually off-campus in Dade and Monroe Counties. Weekend degree programs for working professionals are offered in collaboration with the University's thirteen colleges and schools. Instruction using telecommunications is offered between campuses, public schools, and other locations with the proper equipment.

An individual, employer, public agency or professional organization may request that a specific course or degree program be offered, and may contract with the University to provide credit courses and degree programs at the worksite to benefit a designated group of individuals. Study Abroad courses are also available in several academic disciplines

in Europe, Asia, Africa, Latin America and the Caribbean.

Students may register for Outreach credit courses through the traditional registration process at North Campus or University Park. Special registration arrangements are made for students who meet at off-campus sites. For more information on Academic Credit Programs call (305) 919-5669 in Dade County, or 1-800-310-5548 from other locations.

Distance Learning

Distance Learning coordinates credit & non-credit courses through state-of-the-art technology. Students are linked with professors electronically through television, computers, videotape, satellite teleconferencing, and other innovative technologies. Instruction can occur in the home, in offices, in the community, or at school centers convenient to the learner.

Distance Learning may occur anytime during the day at the convenience of the learner. Some instruction occurs at specific times and in specific locations on- and off-campus. Instead of taking time to travel to and from campuses, students with job and family responsibilities may now tailor their academic work to their own busy schedules.

Each Distance Learning course is the equivalent of an on-campus section of the same course as to learning objectives, course content, and transferability. Students must meet stated prerequisites or assessment scores where applicable. Distance Learning courses provide the student a higher degree of scheduling flexibility.

For more information about Distance Learning and course offerings, call (305) 919-5217.

Professional Development

Non-credit instruction includes career change and retraining programs, and seminars/workshops for professional development or personal enrichment. Outreach offers career certificate programs for travel agents, and applied computer training and total quality management. Professional Development programs are taught by University faculty or professional experts in a specific discipline. A business, agency or professional organization may also contract to have courses

or a degree program offered for employees at a specified location. Continuing education units (CEUs) may be awarded to eligible participants in non-credit instruction applicable to professional licensing requirements.

Students may register for professional development courses by mail, fax (919-5484), at the first class meeting on a space available basis, or through the traditional registration process at North Campus or University Park. Special registration arrangements are made for students who meet at off-campus sites. Course payments may be made by check, money order, Visa, or MasterCard. A catalog of Outreach programs is published each semester and may be requested by calling (305) 919-5669 in Dade and Monroe counties, or 1-800-310-5548 from other locations.

Legal Studies Program

University Outreach offers the following Legal Studies programs: Legal Assistant, Legal Secretary, Law and Business Office Management, Immigration and Nationality Law, Legal Nurse Consultant, Family Mediation training and other courses for attorneys providing CLE units from the Florida Bar. For more information call (305) 348-2491 or 1-800-310-5548.

Roz and Cal Kovens Conference Center

The Roz and Cal Kovens Conference Center at Florida International University supports the teaching, research, and public service mission of the University by offering an outstanding conference and meeting environment. Conference Center staff deliver quality meeting planning support services, and programs that meet or exceed the expectations of all internal and external clients of the Center. Whether it is an academic symposium, a governmental assembly, a civic gathering, a professional seminar, an industrial/technological conference or a multinational corporate meeting, the Kovens Conference Center has a full array of University resources, faculty and staff available.

The Center is fully equipped with state-of-the-art telecommunications resources including computer labs, video-conferencing, audio/visual services, and case study rooms. Conferees have access to

uplink/downlink satellite transmission enabling them to transmit to and from locations throughout the world. Simultaneous translation capabilities for up to three languages are also available. This exceptional array of communications services can satisfy the needs of the most demanding clientele. For more information call the Kovens Conference Center at (305)-919-5000.

Conference Services

Kovens Conference Center staff are available to help you transform your program ideas into successful conferences, workshops, seminars, institutes, meetings and other related educational activities. Before the program, staff can help with program planning and concept design, coordinate bid preparations, coordinate promotional activities, and coordinate all other meeting logistics.

During the program, staff will provide all program support services including directional signs, registration, arrange for required audiovisual, telecommunications, simultaneous translation, computer needs, and issue Continuing Education Units. After the program, staff will wrap-up all conference logistical details, process payment of all invoices, tabulate evaluations, and prepare final financial statements.

For more information, contact Florida International University's Kovens Conference Services staff at (305) 919-5000.

University Outreach Development

Outreach Development is responsible for providing leadership in obtaining financial support for the achievement of University Outreach goals and objectives. This office develops internal and external relationships with key community, legislative, business and professionals in the community at large to ensure the success of North Campus Outreach initiatives. Program personnel coordinate and support the efforts of the University Outreach Development Council, a select group of community volunteers committed to identifying financial resources for Outreach functions. Persons interested in more information on Outreach Development should call (919)-5703.

University Outreach Marketing

Outreach Marketing is responsible for promoting lifelong learning programs, and Kovens Conference Center activities. This office provides professional creative and artistic means of publicizing programs and services, including the development and distribution of publications, advertising, and public information. For more information on Outreach Marketing call (305) 919-5669.

University Relations

The Division of University Relations is responsible for coordinating all of FIU's internal and external public relations activities. The division is comprised of five units: Governmental Relations, Media Relations, Publications, University Communications, and University Events.

Governmental Relations

Governmental Relations coordinates and represents the University at the federal, state and local levels of government.

Media Relations

Media Relations works with local, national and international news media to help promote the university's image, academic programs, research activities and special events. The office is responsible for disseminating all University news releases and statistical information to the media. The Office of Media Relations also produces a monthly public affairs television show, *FIU In View*.

Publications

Publications produces effective and informative publications to advance the University's communications initiatives. The office provides a variety of services including marketing, design, desktop publishing and production. In conjunction with typesetting auxiliary, this office directs and produces university publications promotional collaterals and advertisements.

University Communications

University Communications manages and develops the editorial content of a wide variety of publications used to provide information to FIU's key publics, including alumni, donors, civic and governmental leaders as well as students, faculty and staff. In addition, the office provides public relations and editorial services to the University.

University Events

University Events strengthens ties between the University and community through planning and coordinating major community held on the FIU campuses. The office also assists in hosting visiting dignitaries and coordinating major campus events including Commencement, Convocation, dedications and recognition activities.

Intercollegiate Athletics

FIU is a member of the National Collegiate Athletic Association (NCAA), and the Trans America Athletic Conference (TAAC) for men and women. The University has competed at the Division I-AAA level since September of 1987, having competed successfully at the Division II level since 1972. Programs and services in Intercollegiate Athletics provide an opportunity for student-athletes to develop as skilled performers in an educational setting. Much emphasis is placed on the student as a student-athlete to ensure intellectual, emotional and social well-being.

Athletics

Athletic team membership is open to all full-time students. Women's programs consist of basketball, volleyball, soccer, golf, tennis, track and cross country. Men's programs consist of basketball, soccer, baseball, golf, tennis, indoor and outdoor track and cross country, and softball. To be eligible for intercollegiate competition, the University requires each student-athlete to be in good academic standing and make satisfactory progress toward a degree. Team membership is determined in a manner which does not discriminate based on race, sex, national origin, marital status, age or disability.

Financial assistance is available to both freshmen and transfer students recruited for all 16 athletic teams. Assistance may include grants, scholarships, loans or self-help programs. To be eligible for financial assistance, each student-athlete must be in good academic standing and make satisfactory progress toward a degree.

Campus Recreation

The Intramural Sports Program is designed to provide a healthy, safe, and competitive outlet for students, employees, and alumni of Florida International University. The goal of the intramural sports program is to ensure that all members of the FIU community have an opportunity to participate in some type of recreational sports activity as regularly as his or her interest, ability, and time will permit. Through participation in the intramural sports program individuals are able to enjoy organized sports, have fun, keep physically fit, meet people, cultivate leadership

abilities, and put to good use various learned skills. Values such as sportsmanship, fair play, and mature behavior are stressed and encouraged.

Leagues and tournaments are offered in flag football, softball, soccer, basketball, volleyball, racquetball, bowling and tennis.

Athletic and Recreational Facilities

The Golden Panther SportsPlex encompasses four facilities which serve as the sites for athletic, educational and recreation activities.

The Golden Panther Arena is a multi-purpose facility. There is a seating capacity for special events of 5,000. It contains racquetball courts, basketball and volleyball courts, classrooms and locker rooms. The arena is open to students, faculty, staff, and alumni with valid identification.

The Golden Panther Baseball and Soccer Stadiums are the home to our intercollegiate men's and women's programs. Both stadiums are lighted. The baseball stadium will seat 2,000 and the soccer stadium will seat 1,500.

The FIU Community Stadium is a Football and Track facility. The stadium is the site for the fall and spring commencement ceremonies. Over 14,000 students and their families can take part in this exciting event. The stadium is also home to our intercollegiate men's and women's track and field programs. In the fall Dade County Schools play many of their high school football games in this facility.

FIU students are admitted to all regular intercollegiate athletic home events free of charge. Presentation of a valid University identification card is required.

Please call the following numbers for additional information: SportsPlex Facilities 348-3258; Golden Panther Box Office 348-4263.

Fitness Centers at University Park and North Campuses are equipped with a complete line of Nautilus machines and locker rooms. The Centers are available at no cost to currently enrolled students with valid identification cards. There is a semester fee for faculty, staff, and alumni.

The Aquatic Center on the North Campus overlooks the bay and is

fully furnished to provide an environment for conversation, study and/or sun-bathing. The multipurpose design of the 50 meter x 25 yard pool and diving well allow for recreational and instructional use.

The Racquet Sports Center at University Park has 12 lighted tennis courts and eight lighted racquetball courts. The Racquet Sports Center at North Campus has six lighted tennis courts, along with a sand volleyball court. Both campuses have full-sized basketball courts near their Racquet Sports Centers.

For additional information or hours of operation call:

Campus Recreation: 348-2951
University Park, 919-4571 North Campus.

Fitness Center: 348-2575, University Park; 919-5678, North Campus.

GPA Open Recreation: 348-2900.

Racquet Sports Center: 348-2951, University Park; 919-4572, North Campus.

Aquatic Center: 919-4595.

Centers and Institutes

Center for Accounting, Auditing, and Tax Studies

The Center for Accounting, Auditing, and Tax Studies (CAATS) conducts and sponsors innovative research. Major ongoing projects focus on the audit impact of emerging technology and on detection of fraud.

CAATS builds bridges to practitioners by turning ideas into products; it enhances the value of accountants' services to clients and to the public by contributing to audit efficiency and effectiveness. CAATS' international commitments relate to the accounting issues confronting the less developed nations, particularly in the Middle East and Latin America.

CAATS also conducts seminars and short courses designed to provide educational opportunities to South Florida public accountants, internal auditors, and management accountants. CAATS strives to be self supporting. Net fees earned by providing educational opportunities to accountants, together with contributions received from the public, are applied to research and to the enrichment of graduate instruction. In this way, CAATS provides the margin of excellence which enriches the entire educational experience.

All CAATS activity is dedicated to advancing accounting, auditing, and tax knowledge. CAATS is located in BA 245B, University Park, 348-2586.

Center for the Administration of Justice

The Center for the Administration of Justice (CAJ) was founded at Florida International University, a member of the State University System of Florida, in 1984 to engage in research, training and public education about the administration of justice in Latin America. With offices in Miami and San Jose, Costa Rica, CAJ has become a unique international resource at the forefront of justice sector reform in Latin America.

CAJ employs a multidisciplinary and international staff of specialists, including lawyers, political scientists,

public administrators and public policy analysts. Many are former justice sector officials with experience and skills in justice sector issues.

Giving special emphasis on support to local efforts to strengthen and invigorate fair and independent justice systems, the CAJ regularly works with public officials, scholars and practitioners in Latin America.

The CAJ has become a leading source of information and leadership on justice sector reform issues in Latin America. Its assessments have been widely disseminated and have been critical in public policy decision-making throughout the region.

Center for Advanced Technology and Education (NSF-CATE)

The NSF-funded Center for Advanced Technology and Education - CATE provides a computing environment capable of engaging researchers as well as facilitating classroom and laboratory-based instruction in critical technology area such as image processing and computer vision, neural networks, distributed and parallel processing, visual programming and 3-D modeling. CATE constitutes an infrastructure that is viable for cutting-edge research activities providing an environment that facilitates state-of-the-art educational and research activities. The ONYX parallel machine, confocal microscope, high-speed motion analyzer, roving robot, and several (24) SGI workstations provide the potential for: (a) parallel and distributed processing, (b) high performance 3-D rendering and modeling, (c) real-time processing capability, (d) operating systems and graphics that meet current standards, and (e) high-speed data acquisition, playback, analysis, and communications links.

Center for Banking and Financial Institutions

The College of Business Administration at Florida International University has a long tradition of preparing students for careers in the banking and financial institutions. The Center for Banking and Financial Institutions was established to provide additional services to banks and financial institutions located in the Southeast United States and in Latin America and the Caribbean.

Associates of the Center for Banking and Financial Institutions are a select group of highly qualified functional specialists in the areas of accounting, finance, information systems, marketing, and human resource management, who are interested in the application of their functional specialties in solving contemporary organizational problems in banks and financial institutions.

The Center for Banking and Financial Institutions at FIU meets the demands of the banking and financial service sector through four major activities:

Education: The Center for Banking and Financial Institutions along with the Department of Finance, co-sponsors the Banking Certificate program. Upon completion of a four course sequence of banking and financial institution courses, students are awarded a Certificate in Banking from the College of Business Administration. The Center also supports educational opportunities for bank and financial institution employees and other individuals who wish to continue their education in the area of banking and financial institutions, through other off campus programs.

Management Development: The Center for Banking and Financial Institutions develops and conducts high quality training programs and conferences on topics that are of interest to and demanded by banks and financial institutions. The Center also offers custom in-house training programs for those institutions who desire a more focused or specialized program.

Research: The Center for Banking and Financial Institutions supports theoretical and applied research on problems and issues in the financial service sector.

Consulting: The Center for Banking and Financial Institutions serves as a consulting clearinghouse. The Center will assist banks and other financial institutions in contacting experts from FIU and nationwide to assist them in solving unique problems in their organizations.

The Center for Banking and Financial Institutions is located in BA-320, University Park, 348-2771.

Children's Creative Learning Center

The Children's Creative Learning Center at FIU is an Educational Research Center for Child Development.

The Center offers several programs. An educational pre-school is available at both the North and University Park campuses to children between the ages of 2 years and six months (toilet trained) through 5. In addition, at U.P., an activity based edu-care/flex-time program with day (ages 3 to 5, toilet trained) and evening hours (ages 3 to 6, toilet trained) is offered.

The programs are designed to meet the needs of children Monday through Friday, from 7:45 a.m. to 5:30 p.m. (North Campus) and until 9:00 p.m. (University Park).

Since its inception in 1975, this model program has become well known for providing appropriate hands-on experiences for children of students, faculty, staff, alumni and the neighboring community.

The educational pre-school program offers a creative atmosphere which enhances and promotes involvement in activities, such as: circle time, story time, art, music, science, cooking, dramatic play and pre-reading and pre-math and developmental tasks along with the introduction of educational concepts to convey awareness of the world around us.

The edu-care/flex-time program is filled with fun, child like activities such as story time, arts and crafts, music, movement, dramatic play, and more.

For more information and application, please call us at 348-2143.

Institute on Children and Families at Risk

The Institute on Children and Families at Risk was established by the School of Social Work at Florida International University in 1991. The Institute promotes research, demonstration projects, training, and technical assistance to address the needs of children, youth, families, and the social networks and systems that support them. With an emphasis on prevention, early intervention and major reforms in crisis and out-of-home care, the Institute has generated a series of multi-cultural, multi-generational and multi-modal initiatives. These include training and instructional design for child welfare workers in South Florida.

Research and capacity-building functions of the Institute encompass a range of family support strategies including family-support villages, refugee, immigrant and migrant service initiatives, services and systems integration, consumer-driven practice and policy, community campaigns for culturally-responsive services and missions, and refinancing strategies. The Institute also designs and evaluates improvements in 'helping' technologies for all service systems supporting at-risk children, families and communities.

Emphasizing partnerships at the local, state and national level, the Institute collaborates with a number of institutions, organizations and sectors to promote technology transfer, joint demonstration projects and capacity-building efforts. Special emphasis is on the link between universities, public sector social health services and public schools. The Institute provides consulting services both nationally and internationally with a focus on the training and technology transfer between states and nations on techniques and strategies to better organize services and supports for at-risk children, families and communities.

The Institute also serves as the research and development arm of the School of Social Work and provides research opportunities for master's and doctoral-level students. Its cross-systems endeavors also depend on the leadership and expertise of faculty and students in other disciplines at Florida International University, at several other universities in the South Florida area and the staff of the State of Florida's De-

partment of Health and Rehabilitative Services staff.

Drinking Water Research Center

The Drinking Water Research Center (DWRC) was established by the Florida Legislature in 1977, and charged with the responsibility for applied research on the state's drinking water. Since that time, the Center has responded to state, national and global environmental concerns by expanding its research focus to cover a wide spectrum of water-related environmental issues.

Water Treatment-evaluating treatment processes; evaluating alternative disinfectants and their effect on water quality; researching the use of high energy electrons in water, wastewater and hazardous waste treatment.

Surface Water Quality-studying treatment of domestic, industrial and hazardous wastes since improper disposal can affect surface water quality.

Ground Water Quality-studying ground water movement; investigating water management modeling of the Everglades Basin.

Marine Environment-oil spill shoreline protection and counter measures; studying black band disease of corals.

The DWRC does not conduct academic classes. However, qualified students often have an opportunity to work as a research assistants in the DWRC laboratories or carry out independent research projects. Cooperation and interchange with other departments in the University is stressed.

The Center is part of the College of Engineering and Design and is located at VH 326 and CEAS 2441, University Park, 348-2826.

Center of Economic Research and Education

The Center of Economic Research and Education is a Type II Center approved by the Board of Regents of the State University System. The purpose of the Center is to foster a greater understanding of economics. The Center represents an important link between the University, business, and education communities. As part of its activities, the Cen-

ter undertakes research projects, sponsors conferences and seminars, provides courses in economic education for teachers, and disseminates economic data and information.

Established in 1982 as one of eight centers located throughout the State University System, the Center is located in DM 314, University Park. Its phone number is 348-3283.

Center for Educational Development

The Center for Educational Development (CED) is a multidisciplinary unit based in the College of Education whose mission includes: (1) planning, technical assistance, training and research in support of educational systems development internationally and domestically; (2) increased minority group access to and achievement in educational systems; (3) acquisition of state and external resources for development of educational systems; and (4) multi-institutional collaboration in educational development projects and research.

The Center is governed and supported jointly by Florida International University, Miami Dade Community College, and the University of Miami. It is comprised of two specialized institutes: the International Institute of Educational Development and the Urban Educational Development Institute.

For more information call 348-3418, or write to Dr. Miguel A. Escotet, Director, International Institute of Educational Development, College of Education, University Park Campus, Miami, Florida 33199. E-Mail: iide@solix.fiu.edu

Center for International Executive Education (CIEE)

The CIEE, located at University Park BA 332, was founded with the mission of bridging the resources of the College of Business Administration with the interests of the international business community. The core strategic focus of the CIEE is to increase the competitiveness of organizations by providing training that results in the development of a global management perspective and an understanding of the impact of the

global economic and political forces on the Americas.

The Graduate Diploma Series (GDS) programs offered by the CIEE, facilitates the achievement of this mission by providing a structured program of study to participants who wish to sharpen their global management skills without enrolling in a graduate degree program. This series includes: the Graduate Diploma in International Business (GDIBM), the Graduate Diploma in International Marketing (GDIM), and the Graduate Diploma in International Finance (GDIF).

These programs are designed to provide participants with the competencies and skills necessary to assume responsibilities in the international sales and marketing, management, and finance functions of their organizations. These programs have been structured for participants who have an undergraduate degree in business or engineering.

Non-business majors who wish to update their international business, marketing or finance skills by enrolling in the programs are encouraged to first enroll in an international business language course which will expose participants to the fundamental concepts of doing business in a multicultural setting. This course is offered every summer before the commencement of the GDS programs.

In addition to these programs, the CIEE pursues its mission by sponsoring the Global Manager Program, a 3-week executive development program, in partnership with the business community, that is designed for middle to senior level executives who have to grapple with the challenges of the global economy.

Elders Institute

The Elders Institute, a continuing education unit within the Southeast Florida Center on Aging, serves the educational needs of the senior adults on the University's North Campus. The Institute's mission and scope is to initiate, plan, design, and manage non-credit short courses, lectures, seminars, and workshops for older learners. Programs are offered during daytime hours, and are held primarily on campus. The courses offered are primarily in the humanities, the behavioral sciences and the social sciences. Workshops

and seminars provide opportunities to develop new skills and to explore methods and means for personal growth and self-improvement. The Institute's instructional staff are community experts, University faculty and retired seniors. The participants are motivated learners who seek knowledge, new information and skills for intellectual stimulation and personal growth.

The Elders Institute at Coral Gables presents continuing education courses at the Coral Gables Congregational Church. Half the courses are offered in Spanish; half in English. The Institute is located in Conference Center 301, North Campus, 919-5910.

English Language Institute

Since 1978, the English Language Institute (ELI) has offered non-credit English language instruction to non-native speakers of English in the community and from abroad.

Intensive English Program: Classes in reading, grammar, writing, and conversation are taught at five levels of proficiency. Language laboratory facilities are available in which students can increase their listening comprehension and speaking skills under the guidance of an instructor. Students normally take a full, three-course load, but it is also possible for fully admitted University students to take a course in a single skill.

Testing and Placement: The English Language Institute offers proficiency testing of both written and oral proficiency in English as a support service for academic units throughout the University. Evaluative procedures are designed to fit the needs of individual programs or schools, to assist them in the identification of individual students' level of proficiency in English, and to place students in appropriate programs of study when needed. In addition, the Institute regularly administers the Test of English as a Foreign Language (TOEFL).

Community Outreach Program: The English Language Institute offers non-credit courses in the evening and on Saturday for non-native speakers of English.

Accent Reduction: Accent reduction classes are available for non-native speakers of English who have a good command of the language

but who wish to improve their pronunciation.

Other Programs: Business English, Super Intensive (immersion), Summer Institute.

The English Language Institute is located in LC 204, University Park, 348-2222.

The Family Business Institute

The Family Business Institute was created to provide an on-going series of small, personal, in-depth seminars focusing on challenges faced by mature family business owners, their family, and their non-family staff. A newsletter augments the educational programs. The following corporate sponsors are partners dedicating their resources toward supporting health family businesses: Arthur Andersen LLP, Greenberg Traurig and The Equitable Mutual/Chiappa Agency, NationsBank, Gerson, Preston & Co.

The Family Business Institute is located in BA 332, University Park Campus, (305) 348-4237.

FAU-FIU Joint Center for Environmental and Urban Problems

Florida's environmental and urban problems derive in large part from the state's rapid growth and development. Recognizing the need to address these problems through effective growth management, the Florida Legislature established the Joint Center for Environmental and Urban Problems at Florida International University and Florida Atlantic University in 1972. In the many years since then, most of Florida's growth management laws and policies have taken shape, and the Joint Center has been a frequent and important contributor to policy formation at the state, regional, and local levels. The Joint Center has made its contribution by taking an interdisciplinary approach to these complex and interrelated areas of study.

The Joint Center functions as an applied research and public service facility that carries out programs supportive of government agencies, educational institutions, and non-profit organizations. The Center is active in the following program ar-

eas: (1) research projects, with public and private agencies that address environmental and urban problems; (2) community service projects; (3) production, in conjunction with FIU's media services, of video documentaries concerning urban and environmental issues; (4) workshops, assemblies, conferences and lectures; and (5) publication of the Joint Center's quarterly journal, *Environmental and Urban Issues*.

The Joint Center maintains offices at FIU's University Park Campus, at FAU's Broward Campus at University Tower in Fort Lauderdale, and at the FAU Boca Raton campus.

The FIU office is staffed by an associate director, senior research associate, secretary, and several research assistants. University faculty specialists from the School of Design, Environmental & Urban Systems, Environmental Studies, and several other programs frequently work with Joint Center staff on specific projects.

Research and Service: Research at the Joint Center focuses on the development and implementation of public policy in the areas of growth management, sustainable development and integrated community, urban, and regional planning. The Joint Center is committed to assisting government agencies and communities in these areas. Recent research topics have included economic development for central Miami neighborhoods; energy-efficient urban design; military environmental policy; affordable housing and community development strategies in the non-profit sector; and transportation and land use.

Research clients have included the U.S. Army Environmental Policy Institute, the Florida Department of Community Affairs, Homes for South Florida, Habitat for Humanity, the City of Homestead, the City of Miami, and the Metro-Dade Planning Department.

Through in-house research and through collaboration with FIU faculty, the Joint Center will continue to link university resources to communities and to the region, and will focus interdisciplinary expertise on the problems of south Florida's urban, agricultural, and natural landscapes.

The Center has recently expanded its scope with international linkages to Latin America and South Africa. In 1994, The Joint Center and the FIU School of Design collabo-

rated in the formation of the FIU Ecotourism Research Council. The Council provides a forum for faculty members to pursue multidisciplinary applied research on environmentally sensitive tourism development. The Council's initial efforts are proceeding under an agreement between FIU and the Nicaraguan Ministries of Natural resources and Tourism.

Working with the South African Institute of Town and Regional Planners, the Joint Center has developed an internship program for recently graduated South African planners. The program was initiated in late 1993. The experience gained from this, and the opportunities created by the post-apartheid era, have led to a commitment to expand the program and explore collaborative research opportunities in the field of sustainable development.

Future Aerospace Science and Technology Center for Cryoelectronics (FAST)

FAST is one of five centers created by the Air Force as part of its minority university enhancement program, providing research experience opportunities for undergraduate and graduate students in the area of Electrical Engineering.

The FAST Center evaluates novel applications of space-based cryoelectronics, initially studying new systems for reduction in losses of feed and phase shift networks in phased array transmitter systems. This involves development of low-loss active integrated low-noise phased array or post-processed phased array down-converter receiving systems, high gain-low loss, low noise micro (and later millimeter) wave circuits and systems for space based applications. Of particular interest is the ability to design and fabricate integrated systems which could be used as "steerable" phased array antennas with, some frequency-agility as well.

Current research is focused on issues relating to: integration and hetero-epitaxy of the buffer and dielectric layer with the GaAs semiconductor and 123 high T_c superconductor layers; obtaining good ohmic GaAs contacts at low temperatures, tailoring the surface mor-

phology of the high T_c superconductor to achieve a designed Q value for the passive elements, package design and testing with respect to microwave and thermal cycling consideration, and the identification and minimization of noise source.

The FIU Institute of Government

Since 1982, the Institute of Government, as part of the College of Urban and Public Affairs has provided training, technical assistance, consulting services, policy forums and executive leadership development programs to municipal, county, and state administrators, staff members, appointees, and elected officials in Dade, Monroe, and Broward Counties. This program draws the university together with the community in which it resides, and couples ideas and skills from many disciplines with working governments.

The Institute is primarily funded through a state grant with the Florida Institute of Government located in Tallahassee. There are 15 Institutes of Government affiliated with state universities and community colleges around the state.

Upon request, the Institute develops and delivers specialized training for governmental units to address specific needs they have identified. The training is developed in consultation with the clients and can be delivered at their site or at the University. The Institute offers a workshop series for career development for governmental staff as well.

The Institute also holds conferences and workshops as a forum for community discussion about and analysis of policy issues of concern to local governments and state departments in the South Florida area.

Technical assistance and applied research services are also provided for a wide variety of units and divisions within state and local governments. Issues which may be addressed include public management, public policy analysis, and service delivery systems.

The Institute and the Department of Public Administration conducts the Executive Development Program for mid-level career public and voluntary sector managers. This certificate program emphasizes problem solving and decision making in government and the volun-

tary sector, personal growth, career development and state of the art management tools. Community and government leaders as well as FIU faculty serve as Adjunct Faculty in the Program and participate in panel discussions relating to the aforementioned topics. Participants in the program are also linked with upper-level public administrators and elected officials to provide personal and professional growth and mentoring.

The Institute arranges technical assistance and consulting services when governments feel they would benefit from outside support. They might, for example, be seeking to solve an internal problem, to gather and analyze research data pertinent to their operation, or to carry out an evaluation of some segment or all of their operation.

Topics in the past have included "Right-Sizing Government", "The Homeless Problem", "Decision Making in the Aftermath of Hurricane Andrew", and "Florida Sunshine Laws".

The Institute holds conferences and workshops as a forum for community discussion about and analysis of policy issues of concern to local governments in the South Florida area.

The Institute develops and carries out executive leadership development through a number of programs, such as, the annual Executive Leadership Development Mentoring Program. This program links upper-level public administrators and elected officials with less-experienced administrators and officials. In a year-long program starting each fall, to provide personal and professional growth for each individual.

The HRS/Children, and Families Professional Development Centre

The HRS/Children, and Families Professional Development Centre (PDC) at FIU is responsible for providing Florida Health and Rehabilitative Services (HRS) Children and Families (C&F) program staff with a functional knowledge base as well as a set of practical skills for working with children and families. Located on FIU's north campus, the PDC is staffed by a credentialed and experienced group of instructors who provide training to child welfare workers throughout a geographical catch-

ment area from Vero Beach to Key West.

The PDC provides a foundation of child welfare knowledge and skills to ensure that new staff have competencies in the practices, policies, and procedures that are essential to the mission of the C&F program. In addition, the PDC offers specialty in-service training to increase and develop specialized competencies for experienced C&F staff and the staff from private child welfare service providers.

The stated purpose of the focused PDC training is to enable child welfare workers in general to make better casework decisions that result in improved service outcomes for Florida's children and families.

Hemispheric Center for Environmental Technology (HCET)

The Hemispheric Center for Environmental Technology was established by Florida International University and the United States Department of Energy's Office of Science and Technology (OST) to research, develop, and demonstrate innovative environmental technologies and to establish international alliances to facilitate the implementation of these technologies.

HCET's research and development (R&D) activities focus on the decontamination and decommissioning of nuclear facilities and the management and reduction of radioactive and hazardous wastes. These R&D activities support the Department of Energy's Environmental Management programs in the areas of waste characterization, monitoring, and sensor technology; underground storage tank remediation; and decontamination and decommissioning.

HCET's mission is to develop and market technologies to solve environmental problems and foster sustainable development throughout the Americas. To achieve this end, HCET performs research and development, gathers and disseminates market and technology assessment data, facilitates technology transfer, and forms partnerships with industries and governments throughout the Americas. HCET targets its technology development organizations for government and industrial users of environmental technologies.

The foundation for HCET's technological capabilities has successfully been built within Florida International University's College of Engineering and Design. HCET has the capability and resources to develop innovative technologies as well as assess and demonstrate technologies that have been developed or modified both in-house and by other vendors. HCET also has the expertise to comparatively evaluate emerging technologies and pursue, organize, and facilitate technology transfer from suppliers to consumers.

International Hurricane Center

The International Hurricane Center (IHC) is a Type I research center serving the State University System of Florida. Type I status was approved by the Board of Regents on March 15m 1996, and makes the IHC Florida's official hurricane research center for the ten universities comprising the state system. The IHC is also designated as the formal liaison for NOAA's Tropical Prediction Center (also known as the National Hurricane Center) located on the University Park campus.

The IHC promotes an inter- and multi-disciplinary research mission focused on mitigation of hurricane damage to people, the economy, and the built and natural environments. The IHC's large-scale research agenda includes topics in diverse disciplines such as engineering, architecture, sociology, psychology, anthropology, urban planning, economics, business, finance, insurance, geography and public health, among others. Research opportunities for interested graduate level students exist in most of the areas previously cited.

For more information, contact the IHC at (305) 348-1607 or visit our web site at www.fiu.edu/~hurricane.

Institute of Judaic Studies

The Institute of Judaic Studies (IJS) brings the University and the community together in a mutual effort to nurture teaching and research in academic areas which stand as the cornerstones of Western Civilization. Contemporary issues and problems provide focal points for study, dialogue, exchange and travel.

The objective of the Institute is to infuse Jewish content into the curriculum of the University at all appropriate levels. The Institute fosters scholarship and inquiry into Jewish themes leading to the development of course offerings within existing academic departments. For more information, call 348-3225.

Center for Labor Research and Studies

The Center for Labor Research and Studies, established in 1971 is the only labor center in Florida and one of the most dynamic in the nation. It serves students, faculty and administrators throughout the State University System as well as labor, business, community organizations, academics, policy makers, and journalists, nationally and internationally, through a series of diverse activities.

Accredited through the University and College Labor Education Association (UCLEA), the Center is one of 51 accredited labor centers in the United States. Its broad mission is to provide services to workers and their organizations. This broad mission translates into three specific objectives: 1) provide comprehensive, statewide labor education service; 2) provide programs designed to support faculty research in labor relations, the changing nature of work, and labor education issues; and 3) offer a multidisciplinary credit and non-credit curriculum in labor studies at the University.

As a Type I Center of the Florida State University System, the CLR&S has major responsibility at the University for research and curriculum development on labor relations and the changing nature of work in Florida. This responsibility can be met, in part, by following the University's mandate as described in its mission statement: (to) serve the broad community, with special concern for greater Miami and South Florida, enhancing the metropolitan area's capacity to meet its cultural, economic, social and urban challenges.

Since it was founded, the CLR&S has become recognized for its innovative national and international non-credit education programs. These programs have educated labor and management participants in areas including labor relations, pension fund administration, dispute resolution, labor history, dy-

namics of worker participation and international labor issues.

The Center's non-credit classes for Florida's labor-management practitioners include open enrollment single courses, individualized courses for particular unions, as well as two certificate programs: the Workplace Issues Certificate and the Union Leadership Academy Certificate. The credit program, offered through the College of Arts and Sciences, includes a Bachelor's Degree in Liberal Studies with a concentration in Labor Studies and two related Certificate programs

The Center houses various projects which serve to carry out its research and training functions including non-credit programs and conferences, applied and theoretical research projects, and publications including Latin American Labor News, Labor Studies Forum and an Occasional Paper Series. In addition, three related institutes, the Immigration and Ethnicity Institute, the Human and Labor Rights Institute, and the Institute for Comparative Studies on Work and Society, are housed at the Center. The Center is located in the Labor Center building at the University Park Campus, (305) 348-2371, Fax: (305) 348-2241.

Latin American and Caribbean Center

The Latin American and Caribbean Center (LACC) promotes advanced education and research on Latin America and the Caribbean, a region of intense interest to the United States. It offers undergraduate and graduate certificate programs to both degree and non-degree seeking students, combines research in the social sciences and the humanities, graduate and undergraduate instruction and offers publications, and public education activities that address the full range of issues affecting hemispheric relations. A new Master of Arts in Latin American and Caribbean Studies was implemented in the Fall 1996 semester. This multidisciplinary master's program builds on FIU's strong and growing resources in area studies, most notably the more than 100 faculty members who are recognized nationally and internationally for their expertise on the region, with special emphasis on the disciplines of economics, history, international relations, modern languages, politi-

cal science, and sociology, anthropology. For more information about the M.A. in Latin American and Caribbean Studies see the College of Arts and Sciences section in the Graduate Catalog.

Since it was founded in 1972, LACC has become one of the country's leading programs in contemporary Latin American and Caribbean studies. Over 100 language and area studies faculty regularly offer courses on diverse topics related to the region. Through special seminars, colloquia and other presentations sponsored by LACC faculty and students have access to visiting scholars and other professionals with expertise on Latin American and Caribbean studies. Extensively funded research programs support a continual flow of visiting Latin Americanists and Caribbeanists to the University. Through the external grants it receives, LACC contributes to the University's efforts to strengthen its Latin American and Caribbean studies program. In addition, LACC receives funding from state and federal sources as well as private foundations, among them, the Andrew Mellon, Truxer, Rockefeller, and Ford Foundations.

Several other programs and institutes are part of LACC. Two of these are the Florida Caribbean Institute (FCI) and the Florida-Latin American Institute (FLAI), are programs of the Florida International Affairs Commission, created at the state legislature to improve Florida's cultural, commercial, and educational relations with the region. Both FCI and FCAI administer competitive scholarship programs which allow students from Mexico and the Caribbean to attend any institution in the State University System or the Community College System at the graduate level.

In June 1996 the Summit of the Americas Conference (SMA) was created by the Florida legislature to foster research, analysis, and monitor the economic development of the state, both with regard to external growth to Florida from the rest of the world and internally. Located within LACC, the SMA has made considerable contributions to the University of South Florida's Center for Latin American Studies, and the University of South Florida's Hispanic Center.

Other LACC programs, programs within the University System of Florida, the state government, and the United States government, jointly with the University of South Florida, participate in the following educational programs:

Intercultural Dance and Music Institute, which organizes regular seminars and performances by artists and scholars of the arts.

LACC regularly places students in foreign study programs and local internships. More information is available in DM 353, University Park 348-3594.

Lehman Center for Transportation Research (LCTR)

The Lehman Center for Transportation Research (LCTR) at Florida International University was established in 1993 in honor of Congressman Bill Lehman and his tireless efforts to make South Florida a better place for all of us. The center's vision is to become a strong, state-of-the-art transportation research and training facility. LCTR is committed to serve and benefit our society by conducting research to improve mobility, hence the quality of life issues, develop partnerships in the transportation industry, and educate a multi-disciplinary workforce to plan, manage and implement transportation systems.

Faculty, staff and students at LCTR are involved in research related to the design and operation of transportation systems, public policy, air pollution, and the application of geographic information systems and other advanced technologies such as artificial neural networks and satellite visualization in transportation. Future plans include partnering with the public and private industry to collaborate on transportation related research. LACC-funded research will be conducted on air pollution, intelligent vehicle and highway systems.

Center for Management Development

The Center for Management Development is located in the College of Business Administration and created by the Board of Governors in 1990. Control Planning, Management Information Systems, Strategic Management, Engineering, and Quality Management are the primary areas of research and development. The Center is currently conducting research in the following areas: control planning, strategic management, and quality management.

active, practical, and industry-specific activities aimed toward developing job-related competencies. Certificates, Continuing Education Units (C.E.U.'s), and Nursing Contact Hours may be earned.

Certificate Programs: Professionals who desire to advance their careers by upgrading their knowledge and skills will benefit from participating in the appropriate certificate program. Certificates may be earned in:

- Human Resource Administration
- Training & Human Resource Development
- Managing Quality Health Care Systems

Technical Assistance and Consultation: The Center is a clearing house for matching a variety of faculty resources to complex and specialized needs of the community. It draws on a variety of disciplines in the College of Business Administration to serve the private and public sectors.

The Center is located in BA 332, University Park Campus, (305) 348-4237.

Manufacturing Research Center (MRC)

The Manufacturing Research Center (MRC) is being developed with a grant from the Advanced Research Projects Administration and is a fully integrated manufacturing system from concept, through prototyping, to finished hardware or manufactured tool and die assemblies. With the rapid movement of industry to reduce time to market from product concept, the Center has been designed to support local industry in the South Florida region and provide an environment for advance manufacturing research. The Center contains a design and rapid prototyping front end, integrated into a CNC machining facility through to a back end injection molding machine with injection mold fabrication and part fabrication, both in plastic and metal by spin casting. The Center contains: a rapid prototyping system, a mill-turn machining center, a vertical machining center, a coordinate measuring machine, a material handling system, and injection molding equipment, supporting CAD/CAM and cell control software.

Concurrent Engineering: Under the support of ARPA, the MRC has developed an integrated product/process concurrent engineering system. It is a feature-based engi-

neering system for concurrent product and process design, and focuses on the development of unified product information model, an innovative product modeling technique, a manufacturing resources database and various engineering applications to demonstrate the feasibility of the concurrent engineering concept.

Production Planning & Scheduling: Funded by the Defense Logistic Agency, this project is to improve the practice of apparel production planning, scheduling, and control, with its focus on development and implementation of a practical computer integrated system for the apparel manufacturing industry. The system will accurately estimate time-phased plant capacity, generate production plans, prepare resource requirements, assign workers to workstations, respond to order inquires and change, and control shop floor activities. It will be built upon an open system architecture with a set of production engineering tools for master production planning, capacity planning, learning and skill prediction, material requirements planning, plant loading, worker assignment, and shop floor monitoring and control.

Intelligent Cell Engineering and Control: The purpose of this research (funded by NSF) is to design and develop a neural network based decision support system for use in design and configuration of advanced manufacturing cells and cell control system. This project also explores an intelligent shop floor framework for on-line scheduling and control of flexible manufacturing systems.

Knowledge-Based Data Screening & Analysis for Shuttle Operations: Sponsored by NASA, this project is to design and develop a knowledge-based tool for the shop floor modeling, analysis and reporting.

National Policy and Resource Center on Nutrition and Aging

•Vision: reduce malnutrition and food insecurity and promote good nutritional practices among older adults.

•Mission: work with the federal Administration on Aging (AoA) to provide national leadership in Aging and Nutrition Networks; place food

and nutrition services in the mainstream of home and community based social, health and long-term care delivery systems serving older individuals.

The Center helps Elderly Nutrition Programs, the cornerstone of the Older Americans Act, improve their food and nutrition services, use resources more effectively, and adapt to changes in demographics, health care and public policy. The Center works with the Administration on Aging to assist the Aging Network that includes more than 2200 local nutrition projects serving congregate and home delivered meals, 57 state and territory agencies on aging, 227+ tribal organizations and 650+ area agencies on aging. The Center provides technical training and conducts policy analysis and best practices research. With the rapidly increasing numbers of frail and homebound elders, the Center is dedicated to (1) risk-based screening to identify the most nutritionally needy, (2) expansion of food and nutrition services in health and social service programs, and (3) linking food and nutrition services to home and community health care through multidisciplinary care management to improve quality of life, promote independence, and decrease early nursing home admissions and hospitalizations.

The Center can be reached at (305) 348-1517, fax (305) 438-1518, email: nutrelldr@fiu.edu or online <http://www.fiu.edu/~nutrelldr>. Nancy S. Wellman, PhD, RD, FADA, Director; Dian O. Weddle, PhD, RD, FADA, Associate Director.

Institute for Public Management and Community Service

The Institute for Public Management and Community Service was re-established by the College of Urban and Public Affairs at Florida International University in 1994. The institute administers a multi-faceted municipal development and democratic institution-building project in South America through a grant from the United States Agency for International Development. The project's primary focus is on Chile and Paraguay. In support of this project, the Institute has developed a close working partnership with the senior management of Metropolitan Dade

County by drawing on their expertise and experience in local government issues.

The project's Paraguayan program, its most elaborate component, involves activities at the national, departmental, and municipal levels of government with the goal of strengthening that country's young democratic institutions through a variety of strategies. The Institute is very much involved in helping Paraguayan policy makers identify means to promote governmental decentralization, citizen participation, and the enhancement of local government capacity. Project staff assist high-level Paraguayan officials through resource identification and as advisors.

The Institute has provided both financial and intellectual assistance to Chilean non-governmental organizations and public officials through the funding of conferences and seminars on decentralization, privatization and municipal finance. Drawing on the wide-ranging expertise of scholars and practitioners across the Western Hemisphere, the Institute successfully provides educational opportunities for the practitioners of local government in Latin America.

Institute staff have published various articles and monographs, served as resources to visiting international dignitaries to the Metropolitan Dade County area, have consulted around the world, and were active in the organization of the Summit of the Americas, held in Miami in 1994.

Institute for Public Opinion Research

The Institute for Public Opinion Research (IPOR), is a research arm of the School of Journalism and Mass Communication at Florida International University. IPOR was founded in 1983 to provide decision makers with reliable and timely information on how a scientifically-selected sample of the public stands on important issues, and to enhance the dialogue on major issues among decision makers, the media, and the people of Florida. IPOR provides professional services in all aspects of survey research including study and sample design, questionnaire development, interviewing, data entry, data analysis, and report writing.

IPOR has conducted over 40 surveys, interviewing over 44,000 respondents. These projects include eight years of the FIU/Florida Poll, one of the most comprehensive public opinion surveys conducted in the country. The FIU/Florida Polls ask Floridians how they feel about the important issues facing them—crime and drugs, education, transportation, health, taxes, politics, etc., and tracks these questions year after year to determine whether and how views are changing.

IPOR studies include five needs assessment surveys of the elderly in Florida or Dade County. Two of these surveys, one of Dade County elderly and the other of Florida's elderly population, are the most comprehensive surveys of their kind ever conducted, with the data providing critical information for planning the care of these groups into the next century. Other health-related research conducted by IPOR includes three cancer awareness and prevention/behavior surveys.

Major IPOR surveys that are helping inform critical policy and development decisions include: a survey of over 5,000 Dade County residents on the issues of service delivery and incorporation which has provided information critical to incorporation efforts of areas of unincorporated Dade County; two statewide surveys central to planning for the Florida transportation system on Floridians attitudes and behaviors regarding the state transportation system; two surveys on the effects of Hurricane Andrew that are being used to help disaster planning both locally and nationally; and two surveys of the residents of south Florida of their attitudes regarding police protection and crime that are helping guide the public safety planning in the region.

Other surveys include a study to measure awareness, attitudes, and behavior regarding recycling; studies of drug abuse in the workplace, the school age population, and in the general population in Dade County; several studies measuring public attitudes on international issues including the war with Iraq, and U.S. policy toward the government in Cuba, and studies on parks and recreation, homelessness, taxation and spending, and labor issues.

IPOR is constantly working with new technology and data sources to develop and test new sampling and interviewing methodologies. Using new geographic information sys-

tems technology, IPOR has worked with Dade County planners to provide a sampling strategy for a field study of Dade County elderly living in areas most affected by Hurricane Andrew, and with Federal Emergency Management Agency (FEMA) and Florida's Bureau of Economic and Business Research to collect, manage, and analyze data on the effects of Hurricane Andrew on the population of South Dade.

IPOR conducts its telephone polls from its phone research laboratory at the North Campus of FIU. All IPOR project personnel are well-paid professionals who are specially training for each project and who are monitored for adherence to IPOR's procedures and guidelines.

IPOR is located in ACII, Room 301. For more information call (305) 919-5778; fax (305) 919-5242, or send e-mail to gladwin@servms.fiu.edu

Institute for Public Policy and Citizenship Studies

The Institute for Public Policy and Citizenship Studies was founded in 1985 to offer students, faculty, and the community alternative learning opportunities in public policy and citizenship development. Four key objectives have guided the Institute's programs:

1. To provide non-traditional educational opportunities to the student body on the responsibilities and opportunities of citizenship.
2. To assist students and faculty in understanding the impact that public policy has on their daily lives and in their career pursuits.
3. To promote interdisciplinary research efforts among faculty on local and national policy matters.
4. To encourage joint university and community efforts on local policy issues.

The Institute sponsors the Student Honors Mentor Program, a semester-long opportunity for students to meet and interact with peers and faculty members from other academic disciplines. The Mentor Program encourages participants to examine a public policy issue in a small group setting through discussions, research, or innovative projects. In providing an alternative mode of learning, the Institute hopes to give students practical experience in community decision-making and problem-solving.

The Institute also sponsors and supports the annual Intergenerational Public Policy Summer Institute which teams elder civic activists with high school students, many of whom are at-risk.

The Institute offers an interdisciplinary and practical approach to the study of public policy with its Certificate Program in Public Policy Studies. See 'Certificate Programs' for further information.

The Institute also works in cooperation with other FIU centers, including the Women's Studies Center, The Center on Aging, The Labor Center, and The Latin American/Caribbean Center.

In addition, the Institute sponsors conferences and events focusing on key policy issues that are salient within our local community. Nationally known speakers and University faculty are invited to present their research findings and perspectives on a variety of issues ranging from citizenship education in Dade County to the ethical implications of an aging society to the impact of government regulations on the fishing industry. The conferences are designed to offer the public and university community additional resources in understanding the policy problems that we, as a community, face on a daily basis.

The Institute is located in LC 220, University Park, 348-2977.

Small Business Development Center

The Small Business Development Center (SBDC) is a program designed to provide comprehensive small business management and technical assistance to the small business community. The Center serves as a focal point for linking resources of the federal, state, and local governments with those resources of the University and the private sector. These resources are utilized to counsel and train small businesses in resolving start-up, organizational, financial, marketing, technical, and other problems they might encounter.

The Small Business Development Center is a basic services center. It disseminates business management information, performs financial analyses and management audits, assists in market and feasibility studies, and provides business management counseling and training.

In June 1980, the SBDC started actively fulfilling its mission to the small business community of greater Miami area by providing counseling services and training programs to the public. In the past year, the SBDC staff provided 6,459 people from the community with small business management training. Also, the Center counseled 2,724 persons in starting and managing their small businesses during the same period.

The Center also attracts many clients through its special services such as the International Trade Program and the Florida Energy Assistance Program. These services are designed to provide, respectively, counseling and training for exporters/importers and reduction of energy consumption and costs in small businesses. In addition, we provide business assistance to the Hispanic business community through the Hispanic Enterprise Development Program.

The SBDC is actively involved in promoting community relations for the University through the activities of its staff with Chamber of Commerce, trade associations, and community-based organizations. These activities include serving on committees and numerous speaking engagements.

The Center is located in EAS building, room 2620, University Park, 348-2272, HM 112 A & B, North Campus, 919-5790, and 46 SW 1st Avenue, Dania, 987-0100.

Southeast Florida Center on Aging

The Southeast Florida Center on Aging offers a multi-disciplinary program in gerontology with a unique public sector focus. It is the mission of the Center to serve as a focal point for applied public policy research; to design and implement comprehensive gerontological education and training programs for students, professionals and older learners; and to demonstrate concepts to serve older persons. The Center seeks to achieve its goals through a wide variety of educational activities designed to further the pursuit of knowledge and understanding about aging in today's society, with particular emphasis upon the development, implementation, and evaluation of public policy in Florida, the United States, and throughout Latin America and Caribbean.

Objectives: The Center supports, sponsors, conducts, and participates in a wide range of activities aimed at improving the quality of life for older people of South Florida. Pursuant to its mandate for education and training, research and community service, the Center is engaged in:

1. Development of gerontology education across disciplines throughout the University community.
2. Expanded opportunities for training and professional development of persons working with or planning to work with older people.
3. Aging research, with special emphasis on current and future public policy in the area of long term care.
4. A wide range of lifelong learning and educational opportunities for older people.
5. Technical assistance and support to public agencies and community organizations aimed at improving the effectiveness of programs for older people.

The Center consists of three components:

Research: Focus on applied public policy research, as well as promotion of research involving faculty from a variety of disciplines within the University. There is an emphasis on potential applications of research findings by policy makers and health and social services practitioners.

Education and Training: Organization, in close collaboration with the academic departments, of credit and non-credit certificate programs for undergraduate and graduate students and for practitioners in the field of aging. Delivery of training seminars and workshops both at the University and at locations throughout Southeast Florida.

The Elders Institute, a continuing education program, offers a broad array of continuing education courses for the older learner and is exploring development of additional educational and cultural opportunities for older persons.

Program Development and Technical Assistance: Design of innovative concepts and programs that further public policy objectives through expansion of opportunities for older people and improvement of the delivery of health and social services to them. The Center provides assistance and support for agencies

and organizations serving older people throughout Florida.

The Center is located in ACI 384, North Campus, 919-5550.

Southern Technology Application Center STAC

The Southern Technology Application Center (STAC) serves nine southeastern states and is part of a national network of technology transfer resources and expertise. STAC's mission is to help increase U.S. competitiveness and spur economic development in the southeast through the transfer of critical knowledge. One of the programs STAC operates in the Southeast Regional Technology Transfer Center to help companies acquire and commercialize technology developed by NASA and other federal laboratories. It provides assistance in every phase of technology development and commercialization. STAC's assistance spans from identifying and locating technologies, to analyzing markets, to bringing together experts from government, academic and industry to address complex technical questions. STAC is supported by the State of Florida University System and NASA's Office of Space Access and Technology, Commercial Technology Division.

Women's Studies Center

The Women's Studies Center, established in 1982, is a university program with a multipurpose mission that focuses on the development and coordination of academic women's studies courses and the support of research on gender. In addition, the center coordinates extracurricular programming on gender issues for faculty, staff, students, and the general community.

The center offers a Bachelor of Arts degree in women's studies and a certificate program. The courses in women's studies provide an opportunity for the study of the historical, political, economic, literary, social, and cultural roles of women and of the function of gender in diverse societies and cultures. The courses are coordinated through various university departments, and are open to women and men alike, as a balance to traditional education. In Women's Studies classes, students explore the range of women's experiences, from their

struggle for equality to their contributions in politics, history, literature, psychology, and other subjects. Through this rich discipline, sexual bias throughout society—in the workplace, in school, and at home—is analyzed through historical study and new theory. Equal importance is given to the commitment to discover and teach ideas and knowledge about global concerns, nationality, race, ethnicity, class, age, and sexual identity. Students should refer to the Arts and Sciences women's studies section for degree and certificate details.

The program is directed toward specialists and generalists alike. It offers a plan of study for students who wish to major in women's studies or earn a certificate in women's studies, and it also welcomes students who wish to enroll in its courses as electives.

The center fosters faculty research in Women's Studies through various means including a publications series; research seminars; lecture series; and conferences, such as an annual Women's History Month Conference.

In addition to coordinating academic courses and research in Women's Studies, the program provides a place and opportunity for extracurricular activity. The center offers reentry women's counseling, assistance on issues of inequality, and access to information on gender issues and concerns. The resources of the center are used by the academic and general community, and everyone is welcome to visit or inquire about our services.

The center is located in DM 212, University Park, 348-2408.

Florida's Statewide Course Numbering System

Courses in this catalog are identified by prefixes and numbers that were assigned by Florida's Statewide Course Numbering System. This common numbering system is used by all public postsecondary institutions in Florida and by two participating private institutions. The major purpose of this system is to facilitate the transfer of courses between participating institutions.

Each participating institution controls the title, credit, and content of its own courses and assigns the first digit of the course number to indicate the level at which students normally take the course. Course prefixes and the last three digits of the course numbers are assigned by members of faculty discipline committees appointed for that purpose by the Florida Department of Education in Tallahassee. Individuals nominated to serve on these committees are selected to maintain a representative balance as to type to institution and discipline field or specialization.

The course prefix and each digit in the course number have meaning in the Statewide Course Numbering System (SCNS). The list of course prefixes and numbers, along with their generic titles, is referred to as the "SCNS taxonomy." Description of the content of courses are referred to as "course equivalency profiles."

General Rule for Course Equivalencies

Equivalent courses at different institutions are identified by the same prefixes and same last three digits of the course number and are guaranteed to be transferable between the participating institutions that offer the course, with a few exceptions. (Exceptions are listed below).

For example, a survey course in social problems is offered by 31 different postsecondary institutions. Each institution uses "SYG-010" to identify its social problems course. The level code is the first digit and represents that year in which students normally take this course at a specific institution. In the SCNS taxonomy, "SYG" means "Sociology, General," the century digit "0" represents "Entry-Level General Sociology," the decade digit "1" represents "Survey Course," and the

unit digit "0" represents "Social Problems."

In science and other areas, a "C" or "L" after the course number is known as a lab indicator. The "C" represents a combined lecture and laboratory course that meets in the same place at the same time. The "L" represents a laboratory course or the laboratory part of a course, having the same prefix and course number without a lab indicator, which meets at a different time or place.

Transfer of any successfully completed course from one participating institution to another is guaranteed in cases where the course to be transferred is offered by the receiving institution and is identified by the same prefix and last three digits at both institutions. For example, SYG 1010 is offered at a community college. The same course is offered at a state university as SYG 1010. A student who has successfully completed SYG 1010 at the community college is guaranteed to receive transfer credit for SYG 1010 at the state university if the student transfers. The student cannot be required to take SYG 1010 again since SYG 1010 is equivalent to SYG 1010. Transfer credit must be awarded for successfully completed equivalent courses and used by the receiving institution to determine satisfaction of requirements by transfer students on the same basis as credit awarded to native students. It is the prerogative of the receiving institution, however, to offer transfer credit for courses successfully completed which have not been designated as equivalent.

Sometimes, as in Chemistry, a sequence of one or more courses must be completed at the same institutions in order for the courses to be transferable to another institution, even if the course prefix and numbers are the same. This information is contained in the individual SCNS course equivalency profiles for each course in the sequence.

The Course Prefix

The course prefix is a three-letter designator for a major division of an academic discipline, subject matter area, or sub-category of knowledge. The prefix is not intended to identify the department in which a course is offered. Rather, the content of a course determines the assigned prefix used to identify the course.

Authority for Acceptance of Equivalent Courses

State Board of Education Rule 6A-10.024(17), Florida Administrative Code, reads:

When a student transfers among institutions that participate in the common course designation and numbering system, the receiving institution shall award credit for courses satisfactorily completed at the previous participating institutions when the courses are judged by the appropriate common course designation and numbering system faculty task forces to be equivalent to courses offered at the receiving institution and are entered in the course numbering system. Credit so awarded can be used by transfer students to satisfy requirements in these institutions on the same basis as native students.

Exceptions to the General Rule for Equivalency

The following courses are exceptions to the general rule for course equivalencies and may not be transferable. Transferability is at the discretion of the receiving institution:

1. Courses in the _900-_999 series (e.g., ART 2905)
2. Internships, practical, clinical experiences, and study abroad courses
3. Performance or studio, courses in Art, Dance, Theater, and Music
4. Skills courses in Criminal Justice
5. Graduate courses

College preparatory and vocational preparatory courses may not be used to meet degree requirements and are not transferable.

Questions about the Statewide Course Numbering System and appeals regarding course credit transfer decisions should be directed to Lynette Housty in the Registrar's Office at (305) 348-2320, or the Florida Department of Education, Office of Postsecondary Education Coordination, 1101 Florida Education Center, Tallahassee, Florida 32399-0400. Special reports and technical information may be requested by calling telephone number (904) 488-6402 or Suncom 278-6402.

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 Center **Marvin Nesbit**

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 North Campus **Robert Coatle**
 Director, Recreational Sports,
 North Campus **Gregory A. Olson**
 Director, Upward
 Bound **Sofia Santiesteban**

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 Outreach **Robert B. Leiter**
 Associate Dean,
 University
 Outreach **J. Patrick Wagner**
 Assistant Dean,
 Administration **Rozalia W. Davis**

Director, Distance
 Learning, **Cynthia Elliott**
 Director, Kovens Conference
 Center and Conference
 Services, **TBA**

Intercollegiate Athletics and Campus Recreation

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 Head Men's Basketball
 Coach **Shakey Rodriguez**
 Head Women's Basketball
 Coach **Cindy Russo**
 Head Cross Country/
 Track Coach **Mike Becker**
 Head Men's and Women's
 Golf Coach **John A. Cusano**
 Head Men's Soccer
 Coach **Karl Kremser**
 Head Women's Soccer
 Coach **Everton Edwards**
 Head Softball Coach **TBA**
 Head Men's Tennis
 Coach **Peter Lehmann**
 Head Women's
 Tennis Coach **Ronnie Reis-Bernstein**
 Head Volleyball
 Coach **John Trojaniak**
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 Campus Recreation
 Student Fitness **Nathan Bliss**
 Assistant Athletic Director,
 Compliance
 Student Fitness **Tony O'Neal**
 Assistant Athletic Director,
 Facilities **Mary Alice Manella**
 Assistant Athletic Director,
 Media Relations **Rich Kelch**
 Assistant Athletic Director,
 Marketing
 and Promotion **James Husbands**

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 University Relations **Steve Sauls**
 Director of Government
 Relations **Richard Candia**
 Director, Media
 Relations **Dan Kalmanson**
 Director, Publications **Terry Witherell**
 Director, University
 Communications **Todd Ellenberg**
 Director, University
 Events **Lane Coleman**

College of Arts and Sciences

College of Arts and Sciences

The College of Arts and Sciences furthers the study of fundamental intellectual disciplines, and serves the University's other Colleges and Schools. The College grants Bachelor's, Master's, and Ph.D. degrees. In addition, the College serves students who need to complete general education and core curriculum requirements, and other requirements, in order to enroll in specific disciplines or professional programs.

The College is composed of 19 departments, in addition to the School of Computer Science, the School of Music and several interdisciplinary programs.

Graduate Programs

The College has academic programs leading to Master's degrees in biology, chemistry, comparative sociology, computer science, creative writing, economics, English, environmental studies, environmental and urban systems (offered jointly with the College of Engineering and Design), geology, history, international studies, Latin American and Caribbean studies, linguistics, mathematical sciences, music, physics, political science, psychology, religious studies, and Spanish.

The College offers academic programs leading to the Ph.D. in biology, chemistry, computer science, economics, geology, history, international relations, political science, psychology, and comparative sociology.

Graduate Admission Requirements

The following are in addition to the University's Graduate Admission Requirements:

1. A 3.0 or higher GPA during the last two years as an upper division student or a total score (quantitative plus verbal) of 1,000 or higher on the GRE for the Master's degree. A 3.0 or higher GPA or a GRE verbal and quantitative of 1100 or higher are required for the Ph.D. degree. Foreign students whose native language is not English must take the Test of English as a Foreign Language (the TOEFL examination) and obtain a 500 score or higher.

2. The GRE or GPA stated above are only minimum requirements. All applications are reviewed by the Graduate Studies Admission Com-

mittee, which makes the final admissions decisions. Since admission to the program is competitive, the committee's requirements are normally higher than the minimum aforementioned standards.

Note: The programs, policies, requirements, and regulations listed in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

Biological Sciences

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and Chairperson

Victor Apanius, Assistant Professor

Brad Bennett, Assistant Professor

Charles Bigger, Associate Professor

Richard Campbell, Research
Scientist

Chun-lan Chen, Associate Professor

Dan Childers, Assistant Professor

Tim Collins, Assistant Professor

Keith Condon, Assistant Professor

Leon A. Cuervo, Professor

George H. Dalrymple, Associate
Professor

Maureen Donnelly, Assistant
Professor

James Fourqurean, Assistant
Professor

Brian Fry, Associate Professor

Robert M. George, Lecturer

Walter M. Goldberg, Professor

Jack B. Fisher, Research Scientist

Rene J. Herrera, Associate Professor

Ronald D. Jones, Professor

Christopher Kernan, Research
Scientist

Suzanne Koptur, Associate Professor

David N. Kuhn, Associate Professor
and Graduate Program Director

David W. Lee, Professor

John Makemson, Professor

Gerald L. Murison, Professor

Steven F. Oberbauer, Associate
Professor

Case K. Okubo, Associate Professor
and Head Undergraduate
Advisor

Thomas R. Pilzer, Instructor

Thomas E. Pliske,

Lecturer

L. Scott Quackenbush, Associate
Professor

Jennifer Richards, Professor

Laurie L. Richardson, Associate
Professor

Barbra A. Roller, Lecturer

Philip Stoddard, Assistant Professor

Martin L. Tracey, Professor

Joel Trexler, Associate Professor

Ophelia I. Weeks, Associate
Professor

Scott Zona, Research Scientist

Master of Science in Biology

To be admitted into the Master's degree program in Biology, a student must:

1. Hold a Bachelor's degree in a relevant discipline from an accredited college or university

2. Have a 3.0 average or higher during the last two years of the undergraduate program or a combined score (verbal and quantitative) of 1000 or higher on the Graduate Record Exam.

3. Two letters of recommendation of the student's academic potential.

4. Be accepted by a faculty sponsor.

5. Receive approval from the Departmental Graduate Committee.

6. Foreign students whose native language is not English must take the TOEFL (Test of English as a Foreign Language) and obtain a score of 550 or higher.

Degree Requirements

The Master of Science in Biology consists of a minimum 36 credits, including a thesis based upon the student's original research. A maximum of six credits of post-baccalaureate coursework may be transferred from other institutions, subject to the approval of the Graduate Committee.

Required Courses

BSC 6457	Introduction to Biological Research	3
BSC 5931	Thesis Proposal Seminar	1
BSC 5975	Thesis Defense Seminar	1
Workshops and Laboratories ¹		4
BSC 6971	Master's Thesis ²	6
Electives ³		21
Foreign language competency ⁴		

¹ Following graduate committee approval, students may fulfill this requirement with any combination of graduate workshops, graduate laboratories, and graduate techniques courses (minimum of three separate courses).

² To be taken after qualifying exam is passed.

³ These must include at least 16 credits of courses in the Department of Biological Sciences. No more than six credits can be transferred from another graduate program, subject to the approval of the Graduate Committee. At least six credits must be at the 6000-level (excluding thesis credits). Credits taken at the 4000-level beyond six, or at a lower levels, will not count towards graduation.

⁴ Competency will be determined by examination consisting of a clear translation of technical material in a foreign language. Credits taken to gain such proficiency will not count

toward graduation. As an alternative, students may substitute either six credits of computer programming or mathematics beyond Calculus II.

Graduation Requirements

A grade of 'C' or higher must be obtained in all courses with a cumulative average of 3.0 or higher in the 36 credits, and a thesis must be completed and accepted after presentation to an ad hoc Thesis Committee chosen by the student's Major professor.

Doctor of Philosophy in Biology

To be admitted into the Ph.D program in Biology, a student must:

1. Hold a Bachelor's degree in a relevant discipline from an accredited college or university;

2. Have a 3.0 grade point average during the last two years of the undergraduate program or a Master's degree in a relevant discipline;

3. Have a combined score (verbal and quantitative) of 1,000 on the general Graduate Record Exam (GRE)

4. Be sponsored by a Biology faculty member

5. Arrange to have three letters of recommendation sent to the Biology Graduate Program Director evaluating the applicant's potential for graduate work

6. Receive approval from the Departmental Graduate Committee.

7. Foreign students whose native language is not English must take the TOEFL (Test of English as a Foreign Language) and obtain a score of 550 or higher.

Degree Requirements

The Ph.D in Biology is conferred on individuals in recognition of their demonstrated ability to master a specific field of knowledge and to conduct significant Independent, original research. A minimum of 90 semester credits of graduate work beyond the baccalaureate are required, including a dissertation based upon the student's original research. A maximum of 36 credits may be transferred from another graduate program with the approval of the Advisory Committee.

Required Courses

BSC 7981	Dissertation Proposal Seminar	1
BSC 7982	Dissertation Defense Seminar	1
BSC 5945	Supervised Teaching in Biology	2
Workshops and Laboratories ¹		4
BSC 7980	Ph.D. Dissertation Electives ²	24
		8
Foreign Language Competency ³		

Recommended course

BSC 6457	Intro to Biological Research	3
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¹Following graduate committee approval, students may fulfill this requirement with any combination of graduate workshops, graduate laboratories, and graduate courses (minimum of three separate courses).

²No more than 36 credits may be transferred from another graduate program, subject to the approval of the Graduate Committee.

³Competency will be determined by examination consisting of a clear translation of technical material in a foreign language. Credits taken to gain such proficiency will not count toward graduation. As an alternative, students may substitute either six credits of computer programming or mathematics beyond Calculus II.

Graduation Requirements

A grade of 'C' or higher must be obtained in all courses with a cumulative average of 3.0 or higher in the 90 credits: demonstration of foreign language competency, and a dissertation completed and accepted by the University.

Course Descriptions

Note: Laboratories should be taken concurrently with or subsequent to lectures. Students should register for each separately.

Definition of Prefixes

APB - Applied Biology; BCH - Biochemistry; BOT - Botany; BSC - Introductory Biology; MCB - Microbiology; OCB - Oceanography (Biological); PCB - Process Cell Biology; ZOO - Zoology.

F - Fall Semester offerings; S - Spring Semester offerings; SS - Summer Semester offerings

BCH 5134C Workshop in Chromatography Techniques (1). Workshop covers the theory and practice of chromatographic techniques to

separate complex mixtures of biomolecules, including absorption, ion exchange, size exclusion and affinity chromatography. Prerequisite: Graduate status.

BCH 5411C Techniques in Molecular Evolution Research (5). Ribosomal genes from related organisms are amplified by polymerase chain reaction (PCR) and sequenced. Phylogenetic maps are made by computer from sequence data. Students may use material from their own research. Prerequisites: BCH 3033 and Lab, PCB 4524 and Lab or Graduate Status.

BCH 6130C Workshop in DNA Synthesis and Amplification (1). Workshop in the chemical synthesis of DNA and the amplification of specific genes by the polymerase chain reaction (PCR). Students may synthesize DNA oligonucleotides for use in their own research. Prerequisite: Graduate status and permission of instructor.

BCH 6131C Workshop in Radioisotope Use and Safety (1). Workshop in the safe use of radioisotopes in biological and biochemical experimentation, labelling of biochemical compounds, purification of labelled compounds, and instrumentation involved in detection of radioisotopes. Prerequisite: Graduate status and permission of instructor.

BCH 6132C Workshop in Electrophoresis (1). Workshop in the application of electrophoresis to biochemical and genetic experimentation. Students may use material from their own research in the laboratory section. Prerequisite: Graduate status and permission of instructor.

BCH 6133C Workshop in DNA Sequencing (1). Workshop in the manual and automated sequencing of DNA. Students may sequence DNA from their own research. Prerequisite: Graduate status and permission of instructor.

BCH 6507C Workshop in Radiometry and Spectrophotometry (1). Interaction of light with matter (absorption, fluorescence, light scattering) and emission (chemi- and bioluminescence); analysis of spectra and enzyme kinetics. Prerequisite: Graduate status.

BOT 5406 Algal Physiology (3). Physiology and metabolism of eukaryotic algae, including ecological aspects of the aquatic environment and al-

gal roles in aquatic biogeochemical cycling. Prerequisites: BOT 4405, one year of chemistry or instructor consent. (S)

BOT 5515 Biochemistry of Plant Natural Products (3). Aspects of primary and secondary plant metabolism will be covered including biosynthesis and degradation of natural products as well as their biological/pharmacological activity. Prerequisite: CHM 3211 or BCH 3033. (S)

BOT 5575 Photobiology (3)
BOT 5575L Photobiology Lab (1). The study of basic photochemical mechanisms as they occur in molecular biological processes such as photosynthesis, plant growth, animal vision, bioluminescence, and radiation damage. Prerequisite: Permission of instructor.

BOT 5602 The Functional Ecology of Tropical Plants (3)
BOT 5602L The Functional Ecology of Tropical Plants Lab (1). The relationship of climate and soils to the distribution and function of the major plant groups of the tropical regions. Prerequisites: Two courses in botany or permission of instructor.

BOT 5605 Plant Ecology (3). In-depth study of plant ecology at three levels: individual, population, and community. Laboratory and field exercises will examine lecture topics.

BOT 5605L Plant Ecology Laboratory (1). Field and lab exercises will examine plant ecology of individuals, populations, and communities. Prerequisites: BSC 3043 or permission of instructor. Corequisite: BOT 5605.

BOT 5647 Ecology of Marine Vascular Plants (3). Biology and ecology of seagrasses and mangroves, with an emphasis on South Florida and Caribbean species. Physiological ecology, population and community ecology, and ecosystem processes. Prerequisite: Permission of instructor.

BOT 5682C Florida Plant Communities (3). Two-week field trip to many diverse plant communities of the state. Ecological and environmental factors influencing plant distribution will be examined, contrasting vegetation among sites. Prerequisites: BSC 3043 or permission of instructor.

BOT 5816 Ethnobotany (3). Review the use and management of plants by indigenous people. Discuss emerging theories in ethnobotany,

examine the role of ethnobotany in conservation and resource utilization. Prerequisites: BOT 3810, BOT 3723, ANT 3403, or permission of instructor. (F)

BOT 5816L Ethnobotany Workshop (1). Field methods in the study of plant use by traditional and modern societies. Examines botanical documentation, ethnological description and experimental design. Prerequisite: Permission of instructor.

BOT 5648 Workshop on Aquatic Plants (1). Biology and identification of aquatic plants. Prerequisites: Graduate standing or permission of instructor.

BOT 5924 Workshop in Tropical Families (3). An introduction to important spermatophyte families, including systematics, ecology, and conservation. Includes laboratory and field experience. Prerequisite: Permission of instructor.

BOT 5925 Workshop in the Biology of Southern Florida's Native Trees (3). Distribution, floristic relationships, morphology, reproductive biology, taxonomy, and conservation of trees native to southern Florida. Prerequisites: BOT 3153, BOT 3723, or permission.

BOT 6275 Plant Breeding Systems (3). Ecology, evolution, genetics and development of plant breeding systems. Prerequisite: Permission of instructor.

BOT 6585C Plant Structure and Function (4). A quantitative assessment of plant architecture, morphology and anatomy in relationship to physiology, including the measurement of water relations, energy and gas exchange. Prerequisites: Permission of instructor and graduate status.

BOT 6 Workshop in Field and Laboratory Techniques for Seagrass Ecology (1). Field and laboratory methods used in the study of seagrass communities. The course emphasizes ecological and physiological measurement methods. Prerequisite: Permission of instructor

BOT 6901 Readings in Plant Mating Systems (1). Current literature on theory, biology, and evolution of plant mating systems. Prerequisites: Graduate standing or permission of instructor.

BOT 6920 Workshop in Field Techniques in Natural History of In-

sect/Plant Interactions (1). A workshop in the techniques for collecting and preserving plants and insects for biological and taxonomic research.

BOT 6921 Workshop in Field Techniques in Pollination Biology (1). Techniques to do a thorough study of the pollination biology of any flowering plant; basic methods and simple instruments for field observations, measurements and manipulations. Prerequisite: Graduate status.

BOT 6922 Workshop: Video Image Analysis in Biology (1). Workshop in the use of video image analysis in biological research. Prerequisites: Graduate status and permission of instructor.

BOT 6923 Workshop: Techniques in Plant Reproductive Biology (1). Workshop in techniques for research on pollination and fertilization in plants. Histological and microscopic examination emphasized. Prerequisites: Graduate status and permission of instructor.

BOT 6935 Advanced Topics in Botany (3). An intensive study of particular plant topics not otherwise offered in the curriculum. May be repeated for credit with different subject content. Prerequisite: Graduate standing.

BSC 5215 Introduction to the Mechanics of Biological Systems (3). Mechanical principles are used to analyze the structure and function of plants and animals; especially the statics of bone systems, and support structures of plants. Prerequisite: Permission of instructor.

BSC 5345 Techniques In Scientific Diving (4). Planning and conducting safe scientific diving operations and research. Prerequisite: Civilian Diving Certificate (NAUI/PADI) or equivalent.

BSC 5409C Biology Laboratory Instrumentation for Secondary Teachers I (3). Principles and practice of selected instrumental techniques. Spectrophotometry, electrical measurements and separatory techniques. Not for BSC majors. Prerequisites: Three undergraduate credits in physics, three in chemistry, and six in biology.

BSC 5416C Workshop In Cell Culture Methods and Applications (1). Utilization of primary and established cells to study growth cell cycle, chromosomes, cell differentiation. Special applications to basic problems in

cell molecular biology. Prerequisites: Permission of instructor and graduate status.

BSC 5596C Environmental Instrumentation (3). Theory and techniques for measurement of environmental parameters of interest to field biologist. Prerequisite: Permission of instructor.

BSC 5606 Biological Systematics (3). Systems of nomenclature and contemporary topics in classification, including molecular evidence, numerical methods and cladistics. Prerequisite: Permission of instructor.

BOT 5662C Florida Plant Communities (3). Two-week field trip to many diverse plant communities of the state. Ecological and environmental factors influencing plant distribution will be examined, contrasting vegetation among sites. Prerequisites: BSC 3043 or permission of instructor.

BSC 5825 Wildlife Biology (3). The study of game and non-game wildlife with emphasis on management and population regulation. Prerequisite: Permission of instructor.

BSC 5927 Graduate Bioresource Workshop (1). This workshop is designed to introduce Biology graduate students to the various resources available for graduate teaching and research. Prerequisite: Graduate standing.

BSC 5931 Thesis Proposal Seminar (1). Presentation of thesis proposal seminar. Permission of major professor required.

BSC 5935, 6936 Topics in Biology (1-3). An intensive study of a particular topic or limited number of topics not otherwise offered in the curriculum. May be repeated for credit with different subject content. Prerequisite: Senior or graduate standing.

BSC 5936 Glaser Seminar: The Biology of Tomorrow (1). A series of lectures by an invited, internationally recognized authority in biological topics of current and future concern. Offered in spring semester. (S)

BSC 5945 Supervised Teaching in Biology (1-2). Teaching in a biological discipline, under the supervision of departmental faculty. Prerequisite: Graduate standing.

BSC 5975 Thesis Defense Seminar (1). Presentation of thesis defense seminar. Permission of major professor required. Prerequisite: Thesis proposal seminar.

BSC 6415C Animal Cells in Culture (3)

BSC 6415L Animal Cells in Culture Lab (2). Biology of animal cells cultured in semi-synthetic media: cell nutrition growth, cell cycle analysis, cellular transformation and differentiation, heterokaryons and somatic cell genetics. Prerequisite: Consent of instructor.

BSC 6456C Microcomputer Use in Biology (1). Introduction to microcomputer operating environments, the utility of microcomputers in biology, and computer interfacing to biological instrumentation. Prerequisite: Permission of instructor.

BSC 6457 Introduction to Biological Research (3). Analysis of existing biological data and experimental design. Prerequisite: Graduate standing.

BSC 6926 Workshop in Biology (1-2). A short intensive treatment of a specialized research topic or technique. Prerequisite: Permission of instructor.

BSC 6948 Laboratory Visitation (1-2). Student visits to three laboratories to learn techniques and concepts applicable to M.S. or Ph.D. research. Prerequisite: Permission of instructor.

BSC 6971 Master's Thesis (1-12). Completion of thesis. Prerequisite: Permission of major professor.

BSC 7980 Ph.D. Dissertation (1-12). Completion of dissertation. Prerequisite: Permission of Major professor.

BSC 7981 Dissertation Proposal Seminar (1). Presentation of doctoral dissertation proposal seminar. Permission of major professor required.

BSC 7982 Dissertation Defense Seminar (1). Presentation of doctoral dissertation defense seminar. Permission of major professor required. Prerequisite: Dissertation Proposal Seminar.

MCB 5114 Microbial Diversity (3). Analysis of metabolic and morphological diversity in bacteria in the context of bacterial systematics. Prerequisites: MCB 3023, MCB 3023L and an additional course in microbiology or biochemistry. Corequisite: MCB 5996L.

MCB 5114L Microbial Diversity Laboratory (1). Laboratory to accompany Microbial Diversity lecture. Prerequisites: MCB 3023 and MCB

3023L and an additional course in microbiology or biochemistry. Corequisite: MCB 5996.

MCB 5405 Biology of Photosynthetic Bacteria (3).

MCB 5405L Biology of Photosynthetic Bacteria Lab (1). Study of the physiology and ecology of photosynthetic bacteria, including Blue-green algae (cyanobacteria), purple and green bacteria, and Halobacteria.

MCB 5505 Virology (3)

MCB 5505L Virology Lab (1). Principles and methods of study of bacterial, plant, and animal viruses. Molecular aspects of viral development, virus pathogens, and carcinogens. Prerequisites: Biochemistry, Genetics, and Organic Chemistry. (S)

MCB 6418 Bacterial Mineral Cycling (3).

Energy and metabolic processes; detrital food chains; carbon, nitrogen, sulfur and trace mineral cycling; chemoautotrophy; global element cycles. Prerequisite: Permission of instructor.

MCB 6445 Microbial Bioluminescence (3). Molecular mechanisms, physiology, genetics and ecology of bioluminescence in microorganisms, particularly bacteria. Prerequisite: Permission of instructor.

MCB 6635 Marine Microbiology (3)

MCB 6635L Marine Microbiology Lab (1). Physiological-ecological study of the distribution and biology of marine bacteria; diseases of marine animals; bacterial role in oceanic mineral cycling. Prerequisites: MCB 3023 & L and BCH 3033 & L or MCB 4404 and MCB 4404L.

MCB 6935 Advanced Topics in Microbiology (3). An intensive study of particular microbiological topics not otherwise offered in the curriculum. May be repeated for credit with different subject content. Prerequisite: Graduate standing.

OCB 5634 Marine Ecology (3)

OCB 5634L Marine Ecology Lab (1). Laboratory to accompany Marine Ecology. Prerequisite: PCB 3043. Corequisite: Marine Ecology.

OCB 5670L Techniques in Biological Oceanography (1).

A laboratory course designed to acquaint the student with biological sampling techniques at sea. Shipboard experience will be required as part of the course. Prerequisites: Previous

course in marine biology and permission of instructor.

PCB 5185 Workshop in Microtechnique (1). Laboratory techniques required for preparation of tissues for light microscopy/histological study. Prerequisite: Senior or graduate student status.

PCB 5195 Histochemistry/Microtechnique (3)

PCB 5195L Histochemistry/ Microtechnique Lab (1). Chemistry and use of fixatives and dyes; histochemistry emphasizes procedures used in research and pathology labs including techniques for enzymes, protein, carbohydrate, nucleic acids and lipids. Prerequisite: Biochemistry or Cell Physiology.

PCB 5238 Marine Comparative Immunology Workshop (1).

A workshop at the Keys Marine Lab to present general and unique research methodologies associated with the immunology of marine animals. Prerequisite: Permission of instructor.

PCB 5259 Topics in Developmental Biology (3). Molecular and cellular mechanisms in the development of plants and animals. Prerequisite: Senior status or permission of instructor.

PCB 5303 Limnology (3)

PCB 5303L Limnology (1). Chemical and physical properties of standing and flowing freshwater systems; eco-physiology and interactions of the fresh water flora and fauna in relation to abiotic factors; oligotrophic to eutrophic conditions.

PCB 5327 Coastal Ecosystems and Modeling (3).

Basics of ecology for coastal and wetland ecosystems. The theory and mechanisms of simulation modeling. Hands-on creation and application of computer models in ecological research. Prerequisites: PCB 3043 and MAC 3311 or permission of instructor.

PCB 5344L Tropical Ecology Field Lab (3).

Field course in Costa Rica with fieldwork in two or more diverse habitats (rainforest, and dry forest). Emphasis on diversity and interactions between species. Visits to selected sites of deforestation, conservation and restoration.

PCB 5358 Everglades Research and Resources Management (3). Application of basic skills in ecology to contemporary issues in the Everglades area, with emphasis on the relation between research and man-

agement of wilderness, wildlife, vegetation, water and fire. Prerequisite: PCB 3043 Ecology or permission of instructor.

PCB 5405 Biochemical Ecology (3). Principles of chemical communication between diverse organisms and the importance of a variety of allelochemicals in community structure. Prerequisite: Permission of instructor.

PCB 5407 Workshop: Microelectrodes in Microbial Ecology (1). Use of microelectrodes to measure chemical microenvironments and biological processes in natural samples. Hands-on experience with O₂ and pH electrodes. Prerequisite: Permission of Instructor.

PCB 5423 Advanced Ecology: Populations and Communities (3). Advanced analysis of population and community ecology. Prerequisites: PCB 3043 or permission of instructor or graduate standing.

PCB 5454 Advanced Ecology: Communities and Ecosystems (3). Advanced analysis of ecological principles pertaining to communities, ecosystems, and landscapes, with special emphasis on the South Florida and Caribbean region. Prerequisites: Graduate standing or PCB 3043 and permission of instructor.

PCB 5615 Molecular and Organismal Evolution (3). The evolutionary relationships among nucleotides and proteins as well as the processes which yield these relationships. The possible molecular events leading to speciation. Prerequisites: Genetics and Biochemistry.

PCB 5665 Human Genetics (3)
PCB 5665L Human Genetics Lab (2). Principles and techniques in the analysis of humans and primates. Prerequisites: PCB 3513 and lab, permission of the instructor. Corequisite: PCB 5665.

PCB 5676 Evolution and Development of Sex (3). The evolutionary explanations for the evolution of sexual reproduction and models of sexual differentiation. Prerequisites: Genetics and Evolution or permission of instructor.

PCB 5677 Evolution and Development (3). The models and evidence for the interaction of development and evolution, using both plant and animal systems. Prerequisite: Permission of instructor.

PCB 5686 Population Biology (3).
PCB 5686L Population Biology Lab (1). Intrinsic properties of natural and theoretical populations and their dynamics and interactions, and responses to disturbance. Includes field problems and computer exercises. Prerequisite: A course in genetics, evolution, or permission of instructor. Corequisite: PCB 5686.

PCB 5687C Evolutionary Ecology (4). Adaptations and interactions of plants and animals in natural and disturbed habitats. Prerequisite: PCB 3043 or equivalent.

PCB 5785 Membrane Signal Transduction (3). Hormones and neurotransmitters as extracellular messengers. Membrane receptors and mechanisms of signal transduction: membrane channels and enzymes, direct linkage and G-protein linkage. Second messengers. Prerequisites: BCH 3033 or PCB 3203. (F)

PCB 5786 Membrane Physiology (3). Chemical and physical properties of the plasma membrane, its biosynthesis and functions in transport and signal transduction. Prerequisites: PHY 3048, PHY 3049, BCH 3033 or PCB 3203.

PCB 5806 Endocrinology (3). Biochemistry, physiology and anatomy of the endocrine systems of vertebrates and invertebrates. Steroid, peptide, and terpenoid hormones which control reproduction, growth, and other parameters. Prerequisites: CHM 3211, one physiology course. (S)

PCB 5835 Neurophysiology (3)
PCB 5835L Neurophysiology (1). Comparative neurophysiology; physico-chemical mechanisms of resting and action potentials; synaptic transmission; neural coding and integration; sensory-motor function and neurophysiological basis of behavior. Prerequisites: Biochemistry or Cell Physiology, Calculus.

PCB 5902 Readings in Stable Isotope Studies (1). Discussion of scientific papers published in the fields of isotope ecology and isotope biogeochemistry. Prerequisites: Graduate standing or permission of instructor.

PCB 5934 Topics in Skeletal Muscle Physiology (4). Advanced discussion of some aspects of the biophysics, biochemistry and physiology of skeletal muscle contraction. Topics may vary from year to year. Based on review articles and research pa-

pers. Prerequisite: PCB 4703 or PCB 3703 and PCB 3203 or BCH 3033.

PCB 5938 Ecosystem Studies Seminar (3). Theory and practice of ecosystem analysis, based on discussion of current articles and books. Emphasis on using different approaches to understand natural complexity, with case studies researched by students. Prerequisites: Course in Ecology, permission of instructor.

PCB 6175C Biological Electron Microscopy (5). Principles and techniques of transmission and scanning electron microscopy as applied to biological materials. Lecture-laboratory combination, enrollment limited. Prerequisite: Permission of instructor.

PCB 6235 Comparative Immunology (3). An analysis of the immune systems and mechanisms of invertebrate and vertebrate animals. Prerequisite: Permission of instructor.

PCB 6237 Immunogenetics (3). The impact of classical and molecular genetic analyses on our understanding of the immune response. Prerequisite: A course in Immunology and Genetics.

PCB 6255 Gene Expression in Animal Development (3). Introduction to the molecular biology of animal development; DNA structure, chromatin, transcription, post-transcriptional gene regulation molecular control mechanisms in development. Prerequisite: Permission of instructor.

PCB 6345C Quantitative Field Ecology (6). Methodology in the description and analysis of populations and communities. Prerequisites: Permission of instructor and STA 3123 or equivalent.

PCB 6526 Advanced Molecular Biology (3). Molecular genetics, controlling mechanisms, recombinant DNA, gene splicing and gene vector construction of viral, bacterial, plant and animal systems. Prerequisite: Permission of instructor.

PCB 6566 Chromosome Structure and Function (3). Structural organization and function of the prokaryotic and eukaryotic chromosome: euchromatin/heterochromatin, replication, repair, DNA sequence organization and changes during differentiation and development. Prerequisite: Permission of instructor.

PCB 6786 Membrane Biophysics (3). The structure and function of cell membranes: ionic transport, passive electrical properties, and excitation. Prerequisite: Permission of instructor.

PCB 6875 Trends in Neurobiology (2). Critical analyses and discussions of selected research articles of current interests. Seminar format. Prerequisite: Permission of instructor.

PCB 6926 Workshop Biology - Spatial Analysis and GIS (1-2). Introduction to interpretation and quantitative analysis of spatial data, use of computer-based image processing and Geographic Information Systems as tools for research, application to South Florida landscapes. Prerequisite: Permission of instructor.

PCB 6935 Advanced Topics in Genetics (3). An intensive study of particular genetical topics not otherwise offered in the curriculum. May be repeated for credit with different subject content. Prerequisite: Graduate standing.

PCB 7675 Reproductive Immunology (3). Molecular and cellular interactions in early development, ontogenetics, and mother and fetus. Prerequisite: Permission of instructor.

PCB 7676 Evolution and Development of Sex (3). Models of sexual differentiation and reproduction treated in an evolutionary context. Prerequisite: Permission of instructor.

PCB 7689 Advanced Topics in Population and Evolutionary Genetics (3). Comparison of the synthetic and mutational drift hypotheses; relationships between molecular and phenotypic evolutionary rates and the phenotypic effects of various forms of mutation. Prerequisite: Permission of instructor.

ZOO 5266 Biology of Crustaceans (3).

ZOO 5266L Biology of Crustaceans Laboratory (1). Morphology, physiology, systematics and evolution in crustaceans.

ZOO 5376 Animal Design and Movement (4). Basic biomechanical and behavioral theories of how animals feed and move. Prerequisites: BSC 1011, PHY 3053, and PHY 3054 or equivalent.

ZOO 5434 Primate Biology (3). Survey of the natural history of the prosimians, monkeys, and apes with special emphasis on primate anatomy, evolution, ecology, and be-

havior. Prerequisites: General biology or permission of instructor.

ZOO 5434L Primate Biology Field Lab (1). An introduction to the field study of non-human primate behavior. Prerequisites: General biology or permission of instructor.

ZOO 5456 Ichthyology (3). Systematics, structure, function, ecology, and evolution of fishes. Prerequisites: BSC 1010, BSC 1011, PCB 3043. (S)

ZOO 5456L Ichthyology Lab (1). Accompanies ichthyology lecture. Prerequisite: PCB 3043. (S)

ZOO 5479 Workshop in Field Ornithology: Mark and Recapture Methods (1). Instruction in techniques of banding wild birds, including their capture with mist nets, identification in the hand, and maintenance of federally required records. Prerequisites: ZOO 4472 and ZOO 4472L or permission of the instructor.

ZOO 5732 Advanced Anatomy Demonstration (1-4). Dissection and demonstration of the human body with the emphasis on structure and function. May be repeated to a maximum of eight credits. Prerequisite: ZOO 3733L and ZOO 3734L or permission of instructor.

ZOO 5745 Advanced Neuroanatomy (3). In-depth knowledge of the embryonic development, structure, and function of the human nervous system with a great deal of clinical consideration. Prerequisite: ZOO 4743 or permission of instructor.

ZOO 5754 Comparative Pathology (3). General mechanisms of disease and comparative evaluation of animal diseases of specific organ systems in various animals including fish, reptiles, birds, and mammals. Prerequisites: ZOO 3753 or permission of instructor.

ZOO 5754L Comparative Pathology Laboratory (1). A laboratory to complement the lecture utilizing gross specimens and histopathologic material including glass and projection slides. Prerequisites: ZOO 3753 or permission of instructor.

ZOO 6378C Experimental Approaches to Functional Morphology (4). The use of mechanical analysis, electromyography, high-speed cinematography and other experimental techniques to solve problems in functional morphology. Prerequisite: A course in Anatomy.

ZOO 6935 Advanced Topics in Zoology (3). An intensive study of particular topics not otherwise offered in the curriculum. May be repeated for credit with different subject content. Prerequisite: Graduate standing.

Chemistry

Kenneth G. Furlon, Associate Professor, and Chairperson

David Becker, Assistant Professor

David Chatfield, Assistant Professor

Milagros Delgado, Lecturer

Yiwei Deng, Assistant Professor

Arthur W. Herriott, Professor and Dean

Gary G. Hoffman, Associate Professor

Rudolf Jaffe, Associate Professor

Jeffrey A. Joens, Associate Professor

Webe Kadima, Assistant Professor

Leonard S. Keller, Professor

John T. Landrum, Associate Professor

Ramon Lopez de la Vega, Associate Professor

Zaida C. Morales-Martinez,

Instructor and College

Coordinator for Premedical

Advising and College

Coordinator for Science Student Recruitment and Retention

Kevin E. O'Shea, Associate Professor

John H. Parker, Professor

J. Martin Quirke, Professor

Stephen Winkie, Associate Professor

Hong Xie-Wang, Instructor and Laboratory Coordinator

Master of Science in Chemistry

The requirements for completion of the Master of Science degree are:

A minimum of 32 credits of coursework, a grade of C+ or higher must be obtained in all courses with a cumulative grade point average of 3.0 or higher which must include:

1. At least 18 credits in graduate-level chemistry courses (excluding research and seminar) approved by the thesis committee in consultation with the graduate coordinator with the following guidelines:

a. The 18 credits must include courses in at least three of the five major areas of chemistry (Analytical, Biochemistry, Inorganic, Organic, and Physical).

b. The courses must be at the 5000 or 6000 level chemistry courses (CHM or CHS prefixes) or approved cognates (up to a maximum of six credits).

c. The following courses cannot count toward the 18 credits: CHM 5150 Graduate Analytical Methods; CHM 5225 Graduate Organic Chemistry; and CHM 5423 Graduate Physical Chemistry.

2. Two credits of CHM 6935 Graduate Research.

3. Two credits of CHM 6910L - Graduate Research.

4. Eight credits of CHM 6970 - Thesis Research involving independent thesis research under the direction of a faculty member in the department.

5. Two credits of CHM 6971 - Master's Thesis.

Presentation and submission of a satisfactory research thesis to the Thesis Committee.

Financial Support

Full-time graduate students who are in good academic standing are eligible for financial support. Teaching and research assistantships are available on a competitive basis. Students may also apply for waiver of both in-state and out-of-state tuition. Inquiries concerning application to the program and availability of financial support should be directed to the Chemistry Graduate Coordinator.

Course Descriptions

Definition of Prefixes

CHM-Chemistry; CHS-Chemistry-Specialized; ISC-Interdisciplinary Natural Sciences; OCC-Oceanography-Chemical.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

CHM 5150 Graduate Analytical Methods (3). Analysis of analytical data, electrochemistry, spectroanalytical techniques, chromatography, survey of new analytical methods. Prerequisite: Graduate standing or permission of instructor. (S)

CHM 5156 Advanced Chromatography (3). Intensive examination of the contemporary practice of chromatography including available chromatographic techniques, their selection and application. Prerequisite: CHM 4130 or permission of instructor.

CHM 5181 Special Topics in Analytical Chemistry (VAR). An intensive examination of one or more areas selected by instructor and students. Core course. Prerequisite: CHM 4130 or permission of instructor.

CHM 5225 Graduate Organic Chemistry (3). Advanced topics in organic chemistry: structure of organic molecules, reaction mechanisms, organic synthesis, and natural product

chemistry. Prerequisite: Graduate standing or permission of instructor. (F)

CHM 5236 Spectroscopic Techniques and Structures Elucidation (3). Advanced techniques for the spectroscopic identification of organic compounds. Interpretation of spectral information for determination of structures of various classes of organic compounds. Prerequisites: CHM 4220 and CHM 4230L.

CHM 5250 Organic Synthesis (3). Use of classical and modern reactions in the design and construction of complex organic molecules including natural products. Some topics covered will be construction reactions, refunctionalization, stereochemistry and conformational analysis. Prerequisite: CHM 4220 or permission of instructor.

CHM 5260 Physical Organic Chemistry (3). A series of topics will be discussed including molecular orbital theory as it pertains to organic molecules, kinetic and thermodynamic approaches to the study of reaction mechanisms, quantitative approaches to conformational analysis, etc. Prerequisite: CHM 4220 and physical chemistry or permission of instructor.

CHM 5280 Natural Products Chemistry and Biosynthesis (3). Studies of the chemical origins (biosynthesis), properties, and synthesis of the various classes of naturally occurring compounds: terpenes, steroids, alkaloids, acetogenins. Prerequisite: CHM 4220 or permission of instructor.

CHM 5306 Special Topics in Biological Chemistry (3). Investigation of one or more areas of biologically related chemistry. Prerequisites: CHM 4305 or permission of instructor.

CHM 5380 Special Topics in Organic Chemistry (VAR). An intensive examination of one or more areas selected by instructor and students. Prerequisite: CHM 4220 and physical chemistry or permission of instructor.

CHM 5423 Atmospheric Chemistry (3). Chemical processes in atmospheres. Photochemistry, chemical kinetics, tropospheric and stratospheric chemical reactions, anthropogenic effects on the earth's atmosphere and chemistry of planetary atmospheres. Prerequisite: CHM 3412, CHM 3411, or permission of instructor.

CHM 5425 Graduate Physical Chemistry (4). Prequantum physics, the

Schrodinger equation and its solutions, atoms and molecules, rotational, vibrational, and electronic spectroscopy. Prerequisite: Graduate standing or permission of instructor.

CHM 5440 Kinetics and Catalysis (3). Theory of elementary reactions, activated complex theory, mechanisms of complex reactions. Prerequisites: CHM 3411, MAP 3302.

CHM 5490 Physical Spectroscopy (3). Introduction to atomic and molecular quantum states, selection rules, and fundamental principles of spectroscopy. Introduction to group theory and to the theory of UV/visible, infrared, Raman, microwave, nmr, photo-electron, and mass spectroscopies, and the applications of these methods to the determination of fundamental physical properties and the structure of organic and inorganic molecules. Prerequisite: Physical Chemistry.

CHM 5490L Physical Spectroscopy Lab (1). The theory of spectroscopy and the use of modern instrumentation to investigate molecular structure. Prerequisites: CHM 2211, 2211L. Corequisite: PHY 4604 or CHM 5490.

CHM 5506 Physical Biochemistry (3). Physical properties of biomolecules, molecular conformation; thermodynamic, kinetic, and spectroscopic properties of biomolecules. Prerequisites: CHM 4305 or permission of instructor.

CHM 5517 Solid State (3). Crystalline form of solids, lattice dynamics, metals, insulators, semiconductors, and dielectric materials. Prerequisite: CHM 5490 or PHY 4604.

CHM 5581 Special Topics in Physical Chemistry (VAR). An intensive examination of one or more areas selected by instructor and students. Prerequisite: CHM 3411 or permission of instructor.

CHM 5650 Physical Inorganic Chemistry (3). Introduction to use of physical methods to determine the structure of inorganic compounds. Prerequisite: CHM 4610 or permission of instructor.

CHM 5681 Special Topics in Inorganic Chemistry (VAR). An intensive examination of one or more areas selected by instructor and students. Prerequisite: CHM 4610 or permission of instructor.

CHM 5765 Aquatic Chemistry (3). Redox chemistry, chemistry of sediments, organic biogeochemistry, chemodynamics, and fates of organic pollutants in aqueous environments. Prerequisites: CHM 2211, CHM 4130, or permission of instructor.

CHM 5931 Special Topics (3). A course covering selected special topics in chemistry.

CHM 5932 Special Topics (3). A course covering selected special topics in chemistry.

CHM 5936 Special Topics in Environmental Chemistry (3). An intensive examination of one or more areas selected by the instructor and students. Prerequisite: Permission of instructor.

CHM 6157 Advanced Analytical Chemistry (3). Modern analytical methods, applications, and instrumentation. Topics include spectroscopy, chromatography, electrochemistry, optimization theory, and computerized instrumentation. Prerequisite: CHM 4130 or permission of instructor.

CHM 6281 Environmental Organic Chemistry (3). Characteristics, origin, fate and transformation of organic compounds in air, water, sediments and biota. Prerequisites: CHM 2211, CHM 3411, or permission of instructor.

CHM 6430 Advanced Thermodynamics (3). The laws of classical thermodynamics and their application. Open and closed systems, irreversible processes, high and low temperature systems, solids, liquids, and gases. Core course. Prerequisite: CHM 3411 or permission of instructor.

CHM 6340 Organic Geochemistry (3). Organic geochemistry of recent and ancient environments. Characteristics, origin, and transformation of organic matter in the geosphere, including formation of crude oil. Prerequisites: CHM 2211, CHM 3411, CHM 4130, GLY 1010, or permission of instructor.

CHM 6449 Photochemistry (3). Fundamentals of photochemistry. Excited states, energy, and electron transfer processes, photo-oxidation, reactive species, and environmental photochemistry. Prerequisites: CHM 4220 or permission of instructor.

CHM 6461 Statistical Thermodynamics (3). Principles of statistical thermodynamics. Ensembles, classical and quantum statistics, ideal and non-ideal gases, equilibrium, crystals, liquids, and polymers. Prerequisite: CHM 3411 or permission of instructor.

CHM 6480 Quantum Mechanics (3). Introduction to quantum mechanics. The Schrodinger equation and its solutions, approximation methods, spin, symmetry, structure of atoms and molecules. Prerequisite: CHM 3411 or permission of instructor.

CHM 6511 Polymer Chemistry (3). A quantitative study of polymers. Mechanism of formation, configuration of polymer chains, and the relationship between physical properties and chemical constitution. Prerequisite: CHM 3411 or permission of instructor.

CHM 6905 Independent Study in Chemistry (1-6). Independent study and problems in an area of chemistry, under faculty supervision. May be repeated. Prerequisite: Permission of instructor.

CHM 6910L Graduate Research in Chemistry (VAR). The student works directly with a professor on a research project. Credit is assigned on the basis of four hr/wk per credit hour. Results to be presented at a seminar. Permission of instructor.

CHM 6935 Graduate Seminar (1). An examination of various current research topics in chemistry. Prerequisite: Graduate standing.

CHM 6936 Chemistry Colloquium (1). Analysis of current developments and topics presented by faculty members and registered students. Prerequisite: Admission to graduate program in chemistry.

CHM 6940 Supervised Teaching (1-3). Graduate student serves as lecturer and demonstrator in undergraduate laboratories coordinated and supervised by a faculty member. May be repeated. A maximum of three hours may apply to the Master's degree. Prerequisite: Full graduate standing.

CHM 6949 Industrial Internship (3). A semester of supervised work in an outside laboratory. Prerequisite: Permission of instructor.

CHM 6970 Thesis Research (1-10). Research toward completion of

Master's Thesis. Repeatable. Prerequisite: Permission of Department.

CHM 6971 Master's Thesis (1-6). Completion of thesis. Prerequisite: Permission of major professor.

CHM 7984 Dissertation Research (1-10). Research towards the completion of a doctoral dissertation. Repeatable. Prerequisite: graduate standing.

CHS 5531 Forensic Analysis (3). An introduction to established chemical analysis techniques used in forensic science and new techniques under development. Prerequisites: CHM 3120, CHM 3120L, CHM 2211, CHM 2211L or permission of instructor.

CHS 5531L Forensic Analysis Lab (1). Laboratory to accompany Forensic Analysis CHS 5531. Prerequisites: CHM 3120, CHM 3120L, CHM 2211, CHM 2211L or permission of instructor.

School of Computer Science

Michael Evangelist, Professor and Director

Bill Kraynek, Professor and Associate Director

Walid Akache, Instructor

Paul C. Attie, Assistant Professor

Linda Barasch, Instructor

David Barton, Professor

Toby S. Berk, Professor

Chungmin Chen, Assistant Professor

Yi Deng, Assistant Professor

Timothy Downey, Instructor

Raimund Ege, Associate Professor

Mbola Fanomezantsoa, Instructor

Dawn J. Holmes, Lecturer

Masoud Milani, Associate Professor

Jalnendra K. Naviakha, Professor; Graduate Director

Cyril U. Orji, Assistant Professor

Ana Pasztor, Professor

Alexander Pellin, Associate Professor

Norman Pestaina, Instructor

N. Prabhakaran, Associate Professor

Naphtali Rishe, Professor

Orlando Sauleda, Instructor

Rakesh Sinha, Assistant Professor

Wei Sun, Associate Professor

Mark A. Weiss, Professor

The School of Computer Science offers both a Master's of Science degree and a Doctor of Philosophy degree. The Master of Science degree provides study in state-of-the-art computer applications as well as an introduction to the theoretical foundations of computer science. The Doctor of Philosophy in Computer Science is designed to provide study in all major areas of computer science while leading to the frontiers of knowledge in a chosen field of concentration.

Master of Science in Computer Science

Admission

The following are in addition to the University's graduate admission requirements.

1. A Bachelor's Degree in Computer Science or equivalent degree in a related field from an accredited university or college as judged by the School's Graduate Committee.

2. 'B' average or better in all coursework attempted while registered as an upper-division student in the Bachelor's degree.

3. Acceptable courses in Calculus and Statistics.

4. GRE scores of at least 1650 combined on the verbal, quantitative, and analytical portions. The TOEFL scores must be at least 550. Both GRE and TOEFL must have been taken within the past five years.

5. Three letters of recommendation from persons in a position to judge the applicant's potential success in graduate study.

6. Approval of the Graduate Committee.

Required Courses

CEN 5011	Software Engineering	3
COP 6611	Advanced Operating Systems	3
COT 5420	Theory of Computation I	3
COT 6405	Analysis of Algorithms	3

In addition, the student must choose four courses from the following list, subject to the approval of the Graduate Committee:

CAP 5602	Introduction to Artificial Intelligence	3
CAP 5701	Advanced Computer Graphics	3
CDA 5312	Micro Processing for Software Designers	3
CDA 6939	Advanced Topics in Computer Architecture	3
CEN 5120	Expert Systems	3
CEN 6501	Distributed Processing	3
CEN 6502	Advanced Topics in Concurrent and Distributed Systems	3
CIS 6612	Advanced Topics in Software Engineering	3
CIS 6931	Advanced Topics in Information Processing	3
COP 5621	Compiler Construction	3
COP 6545	Advanced Topics in Database Management	3
COP 6556	Semantics of Programming Languages	3
COT 6421	Theory of Computation II	3
COT 6930	Advanced Topics in Theory	3
COT 6931	Cognitive Sciences	3
COT 6936	Topics in Algorithms	3

In addition, the student must satisfy one of the following two options:

Thesis Option

CIS 6970 Thesis 6

After completion of the other required courses, the student must conduct a research thesis. The topic must first be approved by the faculty member who will supervise the research and then by the Graduate Committee. The thesis will be accepted only after being read and approved by a Reading Committee. An oral defense is required before the Reading Committee.

Non-Thesis Option

Additional Coursework 6

The student is required to take at least six additional semester hours of approved electives. The student then must pass a comprehensive examination which may have both written and oral parts and which is based on the student's coursework. This examination may not be taken more than two times, except by permission of the Graduate Committee.

Remarks: The program requires a 'B' average or higher and a grade of 'C' or higher in each course. A maximum of two courses may be transferred into the program from outside the University, subject to the approval of the Graduate Committee.

Doctor of Philosophy in Computer Science

The requirements for admission to the doctoral program in Computer Science are:

1. A baccalaureate or master degree in Computer Sciences, or equivalent degree in a related field as judged by the School's Graduate Committee.

2. Present a minimum of a 'B' average on all upper division work and acceptable courses in Calculus and Statistics.

3. GRE scores of at least 1650 combined on the verbal, quantitative and analytical portions. The TOEFL must be at least 550; The GRE and TOEFL must have been taken within the past five years.

4. Three letters of recommendation from persons in a position to judge the applicant's potential for advanced graduate study in computer science.

5. Approval of the School of Computer Science Graduate Committee.

A maximum of 36 computer science related graduate semester hours earned elsewhere as a graduate degree seeking student may be transferred to FIU.

Required Courses

All students must complete the following courses and receive a grade of 'B' or higher in each.

CDA 5312	Micro Processing for Software Designers	3
CEN 6501	Distributed Processing	3
CEN 5011	Software Engineering	3
COP 6545	Advanced Topics in Database Management	3
COP 6611	Advanced Operating Systems	3
COT 5420	Theory of Computation I	3
COT 6405	Analysis of Algorithms	3
COT 6421	Theory of Computation II	3
COP 5621	Compiler Construction	3

In addition, all students

1. Must successfully pass a Qualifying Examination based on the student's coursework.

2. Must take at least 15 hours of graduate elective courses approved by the Graduate Committee.

3. Must write a dissertation on their research and successfully defend it orally.

4. Must spend at least one academic year in full-time residence. Normally, this will be after passing the Qualifying Examination.

For additional information and for specific rules and regulations relating to the graduate program, please refer to the web site or write to:

Graduate Program Director
School of Computer Science
Florida International University
University Park
Miami, Florida 33199
<http://www.cs.fiu.edu/grad/>

Course Description

Definition of Prefixes

CAP-Computer Applications; CDA-Computer Design/Architecture; CIS-Computer Information Systems; CGS-Computer General Studies; COC-Computer Concepts; COP-Computer Programming; COT-Computing Theory;

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

CAP 5602 Introduction to Artificial Intelligence (3). Presents the basic concepts of AI and their applications to game playing, problem solving, automated reasoning, natural language processing and expert systems. Prerequisite: COP 3530. (F)

CEN 5120 Expert Systems (3). Introduction to expert systems, knowledge representation techniques and construction of expert systems. A project such as the implementation of an expert system in a high level AI-language is required. Prerequisite: COP 3530 or permission of instructor. (S)

CAP 5701 Advanced Computer Graphics (3). Advanced topics in computer graphics: system architecture, interactive techniques, image synthesis, current research areas. Prerequisites: COP 3530 and COP 3700 or equivalent, or by permission. (S, alternate years)

CDA 5312 Micro Processing for Software Designers (3). Design of application software for OEM products. Topics include: 16-bit microprocessor architecture and assembly language, HLLs for design of microprocessor software, software for multiprocessing and multiprocessor systems. Prerequisite: Permission of instructor. (S)

CEN 6501 Distributed Processing (3). Study of distributed systems and equipment using data communications facilities. Analysis of system architecture, hardware, and software for system design. System integrity and performance issues and techniques are examined. Prerequisites: COP 6611, CEN 4500 and STA 6807. (F)

CEN 6502 Advanced Topics in Concurrent and Distributed Systems (3). Study of the major aspects of concurrent and distributed systems. Topics include foundations of concurrent computation, languages and tools for concurrent systems, distributed real-time systems, distributed multi-

media systems, and concurrent object-oriented systems. (S, alternate years)

CDA 6939 Special Topics: Advanced Topics in Computer Architecture (3). This course deals with selected special topics in computer architecture. Prerequisite: Permission of Instructor. (F, alternate years)

CEN 5011 Software Engineering (3). This course deals with the design of large scale computer programs. Included are topics dealing with planning design, implementation, validation, metrics, and the management of such software projects. Prerequisite: CIS 4610. (F)

CIS 5900 Independent Study (1-10). Individual conferences, assigned readings, and reports on independent investigations.

CIS 5910 Project Research (1-6). Advanced undergraduate or master's level research for particular projects. Repeatable. Prerequisite: Permission of Department.

CIS 5931 Special Topics (VAR). A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

CIS 6612 Special Topics: Advanced Topics in Software Engineering (3). This course deals with selected topics in software engineering. Prerequisite: Permission of Instructor. (S, alternate years)

CIS 6931 Special Topics: Advanced Topics in Information Processing (3). This course deals with selected special topics in information processing. Prerequisite: Permission of Instructor. (S, alternate years)

CIS 6970 Thesis (1-10). Completion of all other requirements for the M.S. Degree in Computer Science.

CIS 7910 Graduate Research (1-25). Doctoral research prior to candidacy. Repeatable. Prerequisite: Permission of Department.

CIS 7980 Ph.D. Thesis (1-10). Prerequisite: Permission of Instructor.

COP 5621 Compiler Construction (3). Basic techniques of compilation; self-compilers; syntax encoding and recognition; code generation and optimization. Prerequisites: MAD 3512 and CIS 4610. (F)

COP 6611 Advanced Operating Systems (3). Topics in operating system design: concurrent scheduling, secu-

urity and protection, virtualizable architectures and monitors. Prerequisite: COP 4610. (S)

COP 6545 Advanced Topics in Database Management (3). Architecture and implementation aspects of DBMS; Distributed databases; Semantic models; advanced database languages, including Prolog-like languages; Semantic aspects of databases; Database machines. Prerequisite: COP 4540. (F)

COP 6556 Semantics of Programming Languages (3). This course provides an overview of systematic and effective approaches to programming. Abstraction; formal specification techniques; program verification and; semantics of programming languages. Prerequisite: COT 5420. (F, alternate years)

COT 5420 Theory of Computation I (3). Abstract models of computation; halting problem; decidability and undecidability; recursive function theory. Prerequisite: MAD 3512. (F)

COT 6405 Analysis of Algorithms (3). Complexity behavior of algorithms is described for Set Manipulation, Graph Theory, and Matrix Manipulation problems, among others. P and NP classes of problems reveal an inherent difficulty in designing efficient algorithms. Prerequisite: COP 3530. (S)

COT 6421 Theory of Computation II (3). Verification of program correctness; program schemes; fixed-point theory of programs; resolution and theorem proving. Prerequisite: COT 5420. (S)

COT 6930 Special Topics: Advanced Topics in Theory (3). This course deals with selected special topics in computing theory. Prerequisite: Permission of instructor. (S, alternate years)

COT 6931 Topics in Cognitive Science (3). A "top-down" view of Computer Science, in particular artificial intelligence, by studying the computational aspects of human cognition. Prerequisites: COT 5420, COT 6421 or permission of Instructor. (S, alternate years)

COT 6936 Topics in Algorithms (3). Advanced data structures, pattern matching algorithms, file compression, cryptography, computational geometry, numerical algorithms, combinatorial optimization algorithms and additional topics. Prerequisite: COP 3530. (F, alternate years)

Creative Writing

Donald Watson, Professor and Chairperson

Lester Standiford, Professor and Director, Creative Writing

Lynne Barrett, Associate Professor

John Dufresne, Associate Professor

James W. Hall, Professor

Campbell McGrath, Assistant Professor

Master of Fine Arts in Creative Writing

The Master of Fine Arts in Creative Writing is the terminal degree for the practicing writer, designed to qualify the recipient to teach creative writing on the collegiate and university level. The program is housed at the North Campus. Writers enjoy the opportunity for editorial experience on *Gulf Stream* magazine, the annual FIU literary Awards competition, the FIU Writers Workshop at Seaside, the Miami Book Fair, and the Writers on the Bay Series, which has included residencies by such writers as Gay Talese, Robert Pinsky, Carolyn Forché, Louis Simpson, John Wideman, Elmore Leonard, James Crumley, Luisa Valenzuela, Tony Hillerman, and Henry Taylor. Such major writers as Dan Wakefield, James Jones and George Garrett have served on the regular faculty.

Admission Requirements

Applicants must have a baccalaureate degree, a 3.0 GPA or a 1000 combined score on the GRE, and a minimum of nine semester hours of undergraduate work in creative writing. However, admission is based primarily on the strength of the applicant's submitted writing sample. Deadline is February 15.

Degree Requirements

Forty eight semester hours are required in studio/academic curriculum, with a minimum in each area as follows:

Literature	15
Writing Workshop (both poetry and fiction required)	18
Form and Theory	3
Thesis	6

There is no foreign language requirement. Graduate workshops include short fiction, the novel, popular fiction, screenwriting, creative non-fiction and poetry. The program places emphasis upon the preparation and completion of a book-length creative thesis. Candi-

dates must pass a final defense/examination.

Fellowships, teaching assistantships, and tuition remission scholarships are available on a competitive basis.

Course Descriptions

Definition of Prefixes

CRW-Creative Writing; ENG-English.

CRW 5130 Advanced Fiction Workshop (5). Practice in the techniques and analysis of fiction through the reading, discussion and revision of student manuscripts in a workshop setting. May be repeated. Prerequisite: 9 hours undergraduate CRW coursework.

CRW 5331 Advanced Poetry Workshop (5). Practice in the techniques and analysis of poetry through the reading, discussion and revision of student manuscripts in a workshop setting. May be repeated. Prerequisite: 9 hours undergraduate CRW coursework.

CRW 5620 Advanced Screenwriting Workshop (5). Practice in the techniques and analysis of screenwriting through the reading, discussion, and revision of student manuscripts in a workshop setting. May be repeated. Prerequisite: 9 hours undergraduate CRW coursework.

CRW 5934 Special Topics In Creative Writing (1-5). A course designed to give students an opportunity to pursue special studies in aspects of creative writing not otherwise offered. May be repeated. Prerequisites: CRW 2001 and three hours of CRW on the 3000/4000 level.

CRW 5935 Special Topics In Creative Writing (1-5). Gives students an opportunity to pursue special studies in aspects of creative writing not otherwise offered. May be repeated. Prerequisites: CRW 2001 and three hours of CRW on the 3000/4000 level.

CRW 5940 Advanced Independent Study In Creative Writing (1-5). Development and completion of a graduate level independent project in creative writing undertaken with the consent of the instructor. Prerequisite: Graduate standing and instructor permission.

CRW 6971 Creative Writing Thesis (3). Research and writing for the creative writing thesis. May be repeated. Prerequisite: 12 hours graduate CRW coursework.

ENG 5058 Form and Theory of Contemporary Literature (3). Various approaches and theories of practice in the major genres of imaginative writing, including development and articulation of the creative esthetic. May be repeated. Prerequisite: Permission of instructor.

Economics

Panagis Liassatos, Professor and Chairperson

Nejat M. Anbarci, Associate Professor

Hassan Arvin-Rad, Assistant Professor

Harvey Averch, Professor, Courtesy Appointment

Alison Butler, Assistant Professor

Manuel J. Carvajal, Professor

Irma de Alonso, Professor

Alan Gummerson, Lecturer

Antonio Jorge, Professor of Political Economy

Ali Cem Karayalcin, Associate Professor

Bruce Kelley, Assistant Professor

Robert J. Lemke, Assistant Professor

J. Kenneth Lipner, Associate Professor

Elisabetta Magnani, Assistant Professor

Devashish Mitra, Assistant Professor

Jorge Salazar-Carrillo, Professor and Director, Center for Economic Research and Education

Constantinos Syropoulos, Associate Professor

Mira Wilkins, Professor

Maria Willumsen, Associate Professor

Ann Witte, Professor

The graduate programs in Economics are designed to offer advanced training in economic analysis and provide students with an opportunity to focus their graduate studies in the areas of development economics, international economics and the economics of Latin America and the Caribbean. While these are the Department's areas of greatest emphasis, graduate coursework in other fields can also be undertaken. The department's programs are further enhanced by the presence of complementary graduate programs in the College of Arts and Sciences, College of Business Administration, and the School of Public Affairs.

Master of Arts in Economics

To be admitted into the Master's degree program in Economics, a student must meet the University's graduate admission requirements and:

1. Have a 'B' average (3.0) or higher during the last two years of undergraduate studies, or a combined score (verbal, quantitative, and analytic) of 1,500 or higher on the three-part GRE, which every candidate must take. (If a student has taken the Graduate Record Ex-

amination before the new system was introduced and scored 1000 or higher on the combined verbal and quantitative sections, the student does not have to retake the examination.) Foreign students whose native language is not English must take the TOEFL and obtain a score of 500 or higher.

2. Receive approval of the departmental graduate committee.

3. Have taken as prerequisites intermediate microeconomics, intermediate macroeconomics, statistics, and calculus. A student who has not fulfilled all these prerequisites may be admitted on a provisional basis. Unless specifically exempted, the student must take these courses as required, obtaining no credit for them in the program.

Degree Requirements

The Master's degree program will consist of 30 semester hours of course work, at a graduate level (course numbers 5000 or above). A maximum of six semester hours may be transferred into the program subject to the approval of the graduate committee. All courses listed below carry 3 credits, except the thesis (6 credits). The specific requirements are:

Core Semester Hours

ECO 7115	Microeconomic Theory I	3
ECO 7206	Macroeconomic Theory I	3
ECO 7424	Econometric Methods I	3

Additional Requirements: (12-15 credits)

Students will be required to write a thesis for 6 credits, (ECO 6971), or take the advanced seminar in applied economics (ECO 6939), which involves writing a research paper.

Electives: (15-18 credits)

A student must take at least four electives in economics. The additional one or two courses required to complete the Master's program may be taken in Mathematics, International Studies, the College of Business Administration, the College of Urban and Public Affairs or in the other college or schools of the University. The graduate committee must approve courses taken outside the department.

Graduation Requirements

To receive the Master's degree in Economics, the student must complete 30 hours of course work with a 'B' (3.0) average or higher; must receive a least a 'B' (3.0) in the core courses; and must receive a grade of 'C' or higher in each course. If the student decides to write a thesis, he/she must receive the grade of 'P'(pass) for ECO 6971.

Doctor of Philosophy in Economics

The admission requirements to the Ph.D. program in Economics are:

1. A baccalaureate degree from an accredited institution.

2. A minimum GPA of 3.0 for the last two years of undergraduate education or a minimum score of 1650 on the three-part Graduate Record Examination (GRE), which every candidate must take. Foreign students whose native language is not English must take the TOEFL and obtain a minimum score of 550.

3. Three letters of recommendation, using the form provided by the Department, from people in a position to judge the applicant's suitability for graduate studies in economics.

4. Completion of the following courses at the undergraduate level: Intermediate microeconomics, intermediate macroeconomics, statistics, two semesters of calculus, and a semester of linear algebra. A student who has not fulfilled all these prerequisites may be admitted on a provisional basis. Unless exempted, the student must take these courses as required, obtaining no graduate credit for them in the program.

The GRE and GPA stated above are minimum requirements. All applications are reviewed by the Graduate Studies Committee, which makes the final admission decisions. Since admission to the program is competitive, the committee's requirements are normally higher than the minimum standards. Meeting the minimum requirements does not guarantee admission.

Degree Requirements

To obtain the Ph.D. in Economics, students must complete the required coursework and fulfill dissertation requirements.

Coursework Requirements

Students must complete 48 hours (16 courses) of graduate level coursework. Supervised research, independent studies, seminars, and dissertation credit do not count towards this objective.

This required minimum of 16 courses consists of eight courses in the Core, six courses in three Fields of Specialization (at least two courses per field, some fields may have special requirements), and two electives as approved by the student's advisor who will be assigned to the student at the time of admission to the program.

Core Courses

ECO 7115	Microeconomic Theory I	3
ECO 7116	Microeconomic Theory II	3
ECO 7206	Macroeconomic Theory I	3
ECO 7207	Macroeconomic Theory II	3
ECO 7405	Mathematical Methods In Economic Analysis	3
ECO 7424	Econometric Methods I	3
ECO 7425	Econometric Methods II	3
ECO 7305	History of Economic Thought	3

Fields of Specialization

Advanced Economic Theory
Economic Development
Economics of Human Resources
Economics of Latin America and the Caribbean
International Economics
Monetary Economics
Urban and Regional Economics

First Year of Graduate Study

Students are required to take courses, which must at least include the first six courses in the core as listed above. At the end of the year, students are required to pass a comprehensive qualifying examination on core theory - the first four of the core courses listed above. A student who fails twice will not be allowed to remain in the program.

Second Year of Graduate Study

Students will be required to take Econometric Methods II (with research paper), History of Economic Thought, and complete coursework in two major fields of specialization. The designation major field is to Ind-

cate a chosen field in which students must pass field examinations by the end of the second year. In contrast, the term minor field designates a chosen area that does not require a field examination and the courses of which do not have to be taken by the second year. Students who fail twice any of their field examinations will not be allowed to continue in that field.

Dissertation Work

Upon completion of field examination requirements, students will be required to choose a specific area of doctoral research. During this phase, which will normally have a total length of two years, the student will:

a. Conduct research and complete a dissertation

b. Continue taking courses to complete a minimum of 12 credits of Advanced Workshop and 18 credits of dissertation.

c. Attend Advanced Workshops by enrolling in ECO 7925 in the dissertation area and present at least one paper a year on the work in that workshop.

Students will normally be required to be enrolled as full-time students at the University for at least a year during the dissertation period. Except under abnormal circumstances, the maximum number of years during which a student may do dissertation work is five years.

Graduation Requirements

To graduate, students must complete all course requirements; fulfill workshop presentation requirements, pass the comprehensive and field examinations, and complete the oral defense and acceptance of the Ph.D. dissertation.

Course Descriptions

Definition of Prefixes

ECO-Economics; ECP-Economic Problems and Policy; ECS-Economic Systems and Development.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

ECO 5709 The World Economy (3).

Designed to give an overview of the crucial issues in the world economy. The course covers trade, capital, labor, and technology flows; transnational economic organizations; current economic crisis; global eco-

nomics interdependence; and the nature and characteristics of international economic order. Required for MIB Program. (S)

ECO 5735 Multinational Corporations (3). Economic theory and multinational corporations. Economic effects. Consequences of nationalization. Spread of the multinational form. State-owned multinational corporations. Prerequisite: Permission of instructor for undergraduates. (S)

ECO 5906 Advanced Individual Study (1-6). Supervised readings, individual tutorial, and preparation of report. Requires consent of faculty supervisor and Department Chairperson. Open to seniors and graduate students.

ECO 5945 Internship (3). Directed individual study which assists the student in using economic analysis in his employment. Prerequisite: Permission of the instructor.

ECO 6076 Teaching Economics (1). This course, required of all graduate assistants, is designed to introduce students to the pedagogical and practical aspects of teaching economics. It is coordinated with the Academy for the Art of Teaching.

ECO 6936 Special Topics (3). A course designed to give students a particular topic or a limited number of topics not otherwise offered in the curriculum.

ECO 6938 Individual Graduate Study (6-9). Supervised readings, tutorial, and preparation of report. Open only to graduate students. Requires consent of supervisor and approval of Department Chairperson.

ECO 6939 Advanced Seminar In Applied Economics (3). Variable-topic study group in application of economic analysis to specific problems. Open to seniors and graduate students. (S)

ECO 6971 Thesis (6). Writing and completion of thesis by candidate for a Master of Arts. Prerequisites: Student must be a Master's degree candidate, have had at least 15 hours of graduate work in economics; have a thesis topic approved by the Department's Graduate Committee and permission from the instructor.

ECO 7115 Microeconomic Theory I (3). Models of consumer and producer behavior, partial equilibrium analysis of product and factor mar-

kets, two/sector models of general equilibrium and welfare economics. Prerequisites: ECO 3101 or equivalent, Calculus I; Calculus II recommended. (F)

ECO 7116 Microeconomic Theory II (3). The Hicks/Samuelson and Arrow/Debreu models of general equilibrium. Activity analysis and competitive equilibrium. Capital theory. Leontief/Sraffa/Marx Systems. Temporary equilibrium and money. Prerequisites: ECO 7115 and ECO 7405. (S)

ECO 7118 Graduate Seminar in Economic Theory (3). Variable-topic graduate study group in theoretical problems. Open only to students with graduate standing.

ECO 7135 Growth, Distribution and Prices (3). Alternative theories of growth, income distribution and prices. Basic growth models; neo-classical capital theory and Cambridge controversies; neo/Marxian, neo/Keynesian and other approaches. Prerequisites: ECO 7116, ECO 7207, ECO 7405.

ECO 7136 Classical and Marxian Economic Theory (3). Classical and Marxian theories of value and capital in a mathematical mode. The Transformation Problem. Simple and expanded reproduction. The falling rate of profit and other Marxian crises. Prerequisites: ECO 7115, ECO 7206, ECO 7405, ECO 7116.

ECO 7206 Macroeconomic Theory I (3). Analysis of macroeconomic models of income determination and the price level, microeconomic foundations of macro-behavior, macroeconomic models, and basic open economy macroeconomics. Prerequisites: ECO 3203, ECO 4410, or equivalents; Calculus I; Calculus II recommended. (F)

ECO 7207 Macroeconomic Theory II (3). Alternative approaches to macroeconomic theory. Business cycle theories and theories of growth and income distribution. Prerequisites: ECO 7115, ECO 7206, ECO 7405.

ECO 7216 Monetary Theory and Policy (3). Relationship of money supply and interest rate to economic stabilization. Consideration of federal reserve system, money market, and factors determining money supply and demand. Neo-Keynesian, Chicago, and radical policy views.

ECO 7236 Money, Banking, and Monetary Policy (3). Monetary theory and its application. Consideration of central banking in the U.S. and its relation to the international economy, money markets, and financial intermediaries. Survey of current policy views.

ECO 7305 History of Economic Thought (3). Exploration of the evolution of economic thought and analysis in the changing socio/historical, institutional and political setting in which it takes place. Prerequisite: Permission of instructor. (S)

ECO 7405 Mathematical Methods in Economic Analysis (3). Application of mathematical methods to economics. The topics and tools of mathematical economics are presented in a rigorous fashion within an economic context. Prerequisites: Calculus I, ECO 3101 and ECO 3203, or equivalents. (F)

ECO 7424 Econometric Methods I (3). Practical and theoretical foundations of empirical economics. Knowledge in formulation, estimation, and evaluation of econometric models. Prerequisites: ECO 4410 or equivalent; ECO 7423, Calculus I; Calculus II recommended. (S)

ECO 7425 Econometric Methods II (3). A continuation of ECO 7424. Advanced single equation estimation, estimation of distributed lags, simultaneous equations, time series and models of qualitative choice. Prerequisites: ECO 7424 and MAS 3103 or equivalent. (F)

ECO 7429 Topics In Econometrics (3). Selected topics in econometrics. Intended to acquaint students with current research in the field. Material covered will vary from year to year with instructor. Prerequisites: ECO 7424 and ECO 7425.

ECO 7505 Public Finance (3). Partial and general equilibrium analysis of tax incidence efficiency, public goods, public pricing problems, the social rate of discount, and non-market decision making.

ECO 7617 Seminar In Economic History (3). Topics in economic history, exploration of the economic history literature on a selected theme, student presentations. Prerequisite: Permission of instructor for undergraduates.

ECO 7705 International Trade (3). Positive and normative aspects of international trade. Theories of comparative advantage, commercial

policy, trade and income distribution. Prerequisites: Advanced Microeconomic Theory; Calculus. (F)

ECO 7716 International Money (3). Theory of international monetary equilibrium. Problems of international payments and exchange rate control; their effect on international monetary problems. Analysis of short and long term monetary flows and macroeconomic adjustment. Prerequisites: Advanced Macroeconomics and Calculus. (S)

ECO 7925 Advanced Workshop (3). Enables students to attend advanced workshop presentations and to present the results of their own research. Prerequisite: Completion of field examination requirements. (F,S)

ECO 7980 Dissertation (Ph.D.) (3-12). To be taken every semester for research on, and writing of Ph.D. dissertation by candidates for the Ph.D. Prerequisite: Completion of field examination requirements.

ECP 6605 Urban and Regional Analysis (3). Application of economic analysis to urban growth and the urban-regional environment. Consideration of public services, transportation, ghetto problems, and urban organization. Analysis of environmental protection problems and policies. Recommended preparation: ECO 3101, ECO 3203 and ECP 3303.

ECP 6705 Managerial Economics (3). Basic microeconomic concepts as they apply to decision making within the organization; supply and demand; market structure and market behavior in specific industries. Prerequisites: ECO 3021 and ECO 3011. (F,S,SS)

ECP 6715 Macroeconomic Forecasting for Management (3). Basic macroeconomics concepts as they apply to decision making within the firm. Traditional models of income determination and forecasting analysis. Prerequisite: ECP 6705. (F,S,SS)

ECP 7035 Cost-Benefit Analysis (3). This course covers benefit-cost analysis, cost-effectiveness analysis, benefit-risk analysis, risk-risk analysis, and systems analysis. All of these techniques are designed to provide guidance to decision makers, particularly in the government sector. Prerequisite: ECO 3101.

ECP 7205 Labor and Human Resources (3). Empirical and theoretical analysis of the factors determining employment and earnings, recent developments in the theory of labor supply, critiques of neoclassical theory, and current issues in public policy. Prerequisite: Calculus.

ECP 7405 Industrial Organization (3). The organization of the industrial economy with particular emphasis as to the type of competition, the bases of monopoly power and the extent of monopoly power. Prerequisites: Advanced Micro and Calculus.

ECP 7606 Urban and Regional Economics (3). The economics of urbanization processes, internal organization of cities, and regional settlement. Spatial growth models and spatial development planning. Prerequisites: ECO 7115, ECO 5205, ECS 4013 or equivalent; and ECO 6636. (F)

ECP 7636 Location Theory (3). Systematic exposition of urban and industrial location theory. Spatial price theory and spatial competition. Prerequisites: ECO 3101 or equivalent; Calculus I; Calculus II and ECO 7115 recommended. (S)

ECP 7706 Managerial Economics (3). Analysis of the economic decisions of firm managers, emphasizing the practical application of concepts to economic problem solving by managers, public administrators and other decision makers. Prerequisites: Ph.D. or advanced Masters.

ECS 5005 Comparative Economic Systems (3). A critical evaluation of the design, goals, and achievements of economic policies in capitalist and socialist economies. Prerequisite: Permission of instructor for undergraduates.

ECS 5025 Economic Planning (3). Analysis of planning methods in capitalist and socialist economies. Evaluation of macro and micro economic planning tools (input-output) and programming techniques. Theory and practice of economic development planning of agriculture, industrialization, foreign trade, and manpower. Prerequisite: Graduate standing or permission of the instructor.

ECS 5027 Economic Development of Emerging Nations (3). Specific economic problems of emerging nations and national groupings. Basic approaches to economic develop-

ment; major proposals for accelerating development. Role of planning. Trade, aid, and economic integration. (F)

ECS 6436 The Economics of Caribbean Migration (3). The course examines the economic causes and consequences of Caribbean immigration to the United States. Special emphasis on the effects of Caribbean migration on the United States economy.

ECS 7015 Development Economics: Theory (3). Analytical approaches to economic development. Analysis of macro models, specific resources and sectors, and trade and income distributional problems in relation to developing countries. Prerequisites: ECO 7115 and ECO 7116 or equivalents. (F)

ECS 7026 Development Economics: Planning and Policy (3). Planning and policy making in developing economies. Economy-wide planning models; project appraisal; financial, stabilization and trade policies. Prerequisites: ECO 7115, ECO 7116, and ECO 7405. (S)

ECS 7405 Economics of Latin America (3). Dependence, population explosion, urban migration, agricultural reform, industrialization and import substitution, common markets. Prerequisite: Permission of instructor for undergraduates.

ECS 7435 Economics of the Caribbean (3). Macroeconomic assessment; income distribution, employment and migration; industrial and agricultural development; international trade, multinational and integration attempts. Prerequisite: Permission of instructor.

ECS 7445 Economics of Central America (3). Recent economic events in the region dealing with institutional background and structure of current economic activities. Special emphasis on problems of growth, social transformation and economic integration. Prerequisite: Permission of instructor. (F)

English

Donald Watson, Professor and Chairperson

Harry T. Antrim, Professor and Director of Master of Arts in Literature Program

St. George Tucker Arnold, Associate Professor

Joan L. Baker, Assistant Professor

Lynne Barrett, Associate Professor

Lynn M. Berk, Professor

Lisa Blansett, Assistant Professor

Gisela Casines, Associate Professor and Associate Dean

Maneck Daruwala, Associate Professor

Carole Boyce Davies, Associate Professor and Director of African-New World Studies Certificate Program

Theresa DiPasquale, Associate Professor

John Dufresne, Associate Professor

Charles Elkins, Professor

Mary Jane Elkins, Associate Professor and Head Advisor

Peggy Endel, Associate Professor

Mary Free, Associate Professor and Assistant Chairperson

James Hall, Professor

Peter Hargitai, Instructor

Bruce Harvey, Assistant Professor

Alfonso Hawkins, Assistant Professor

Marilyn Hoder-Salman, Associate Professor and Director of Women's Studies Center

Tometra Hopkins, Assistant Professor

Kenneth Johnson, Associate Professor

Jeffrey Knapp, Instructor

Kathleen McCormack, Associate Professor

Campbell McGrath, Assistant Professor

Carmela Pinto McIntire, Associate Professor

Asher Z. Milbauer, Associate Professor

Adele S. Newson, Associate Professor

Robert Ralner, Instructor

Meri-Jane Rochelson, Associate Professor

Richard Schwartz, Associate Professor

Ronn Silverstein, Instructor

Ellen Sprechman, Lecturer

Lester Standiford, Professor and Director of Creative Writing Program

Linda Strong-Leek, Assistant Professor

Richard Sugg, Professor

James Sutton, Assistant Professor

Patricia Wallace, Assistant Professor

Butler H. Waugh, Professor

Barbara Weitz, Instructor

C. Kemp Williams, Associate Professor

Mehmet Yavas, Associate Professor and Director of Linguistics Program

The English Department offers three graduate degree programs: Creative Writing, Linguistics and Literature. The descriptions of the Creative Writing and the Linguistics programs can be found under their respective headings in this catalog.

Master of Arts in English

To be admitted into the Master's program in English, a student must meet the University's graduate admission requirements and have:

1. A bachelor's degree in English or a related field;
2. A minimum 3.0 undergraduate grade point average;
3. A combination of 1000 (verbal and quantitative) on the GRE;
4. Two letters of recommendation from undergraduate or graduate professors;
5. A personal essay;
6. Those who might be chosen for teaching assistantships will be interviewed by at least one member of the committee.

Degree Requirements

The Master's degree program will consist of 30 semester hours of course work, at a graduate level (course numbers 5000 or above). A maximum of six semester hours may be transferred into the program subject to the approval of the graduate committee.

Required Courses:

ENG 5048	Literary Theory	3
LIT 5405	Literature, Language and Society	3

Electives: A maximum of 24 semester hours (5000 or 6000 level may be taken at either campus.

Thesis: LIT 6970 Master's Thesis 6

Student must conduct a research thesis. The topic must be approved by the faculty member who will supervise the research and then by the Graduate Committee. The thesis will be accepted only after being read and approved by a Reading Committee. An oral defense is required before the Reading Committee.

Below is a list of graduate courses that are offered by the English Department in addition to those

offered in the Creative Writing and Linguistics programs.

Course Descriptions

Definition of Prefixes

AML - American Literature; CRW - Creative Writing; ENG - English-General; ENL - English Literature; LIN - Linguistics; LIT - Literature.

AML 5305 Major American Literary Figures (3). Each section will consider the lifework of several authors such as Hawthorne, Melville, Whitman, Twain, James, Faulkner, Mailer, Wright, Baldwin. May be repeated.

AML 5505 Periods in American Literature (3). The literature and criticism regarding one specified period of American Literature, such as Colonial, Federal, Transcendental, Antebellum, and Twentieth Century. May be repeated with change of period. Prerequisite: Permission of instructor.

ENG 5009 Literary Criticism and Scholarship (3). Techniques and goals of humanistic research, bibliography, and critical commentary.

ENG 5018 Practical Criticism (3). Applies various critical theories - e.g. the formalistic, historical, structural, archetypal, sociological, etc. - to specific literary productions.

ENG 5026 Advanced Textual Reading (3). The study of selected texts for interpretation from different critical and theoretical perspectives. May be repeated. Prerequisite: Admission to the graduate program in English or by permission of instructor.

ENG 5048 Literary Theory (3). An introduction to issues in the nature of literature, the philosophy of criticism, and methods of interpretation. The theoretical foundations for literary study. Prerequisites: Admission to the graduate program in English or by permission of the instructor.

ENG 5058 Form and Theory of Contemporary Literature (3). Various approaches and theories of practice in the major genres of imaginative writing, including development and articulation of the creative esthetic. May be repeated. Prerequisite: Permission of instructor.

ENG 5907 Independent Study (VAR). Individual conferences, assigned readings, reports on independent investigations, with the consent of the Chairperson.

ENG 6909 Independent Study (VAR). Individual conferences, assigned readings, reports on independent investigations, with the consent of the Chairperson.

ENG 6935 Special Topics in College Pedagogy (3). The pedagogy of teaching a designated area of college and university English, such as Shakespeare, American literature, film studies, creative writing, or linguistics. Course content and organization to be determined by the individual professor. Course does not meet certification requirements.

ENG 6937 Teaching College Composition (3). A seminar-workshop introducing the pedagogy of academic and professional writing courses at the university and college level, to include traditional rhetoric, writing as process, the modes of discourse, and post-structuralist theory. Course does not meet certification requirements. Prerequisite: Graduate standing. Corequisite: College composition practicum.

ENG 6942 College Composition Practicum (1). Practical experience in the teaching of English at the university and college level through supervised activities to include tutorials, evaluating, and commenting on student essays, supervised classroom discussion and teaching. Course does not meet certification requirements. Prerequisite: Permission of instructor.

ENL 5220 Major British Literary Figures (3). Each section will consider the lifework of an author such as Chaucer, Spenser, Milton, Pope, Wordsworth, Dickens, Browning, Joyce, or others. May be repeated.

ENL 5505 Periods in English Literature (3). The literature and criticism regarding one specified period of English Literature, such as Medieval, Renaissance, Victorian, Twentieth Century, and Contemporary. May be repeated with change of period. Prerequisite: Permission of instructor.

LIN 5019 Metaphor, Language, and Literature (3). Examines nature of metaphor as a cognitive phenomenon; how we use metaphor to conceptualize basic physical and cultural notions; role of cognitive metaphor in literature. Prerequisites: LIN 3013 or LIN 5018.

LIN 5211 Applied Phonetics (3). Study of sounds and suprasegmentals of English. Comparison of phonetic features of English with those

of other languages. Universal constraints and markedness in learning second/foreign language pronunciation. Prerequisites: LIN 3010, LIN 3013, or LIN 5018 or the equivalent.

LIT 5363 Literary Movements (3). Individual sections will study the authors, works, and audiences involved in such phenomena as Humanism, Mannerism, Romanticism, Symbolism, the Harlem Renaissance, and others. May be repeated.

LIT 5405 Literature, Society, and Language (3). This seminar explores language's relationship to social formation, specifically as it applies to the relationship between literature and social groups and institutions. Prerequisites: Admission to the graduate program in English or by permission of the instructor.

LIT 5426 Authors in their Times (3). A focus on one or more designated authors and the biographical, political and historical context in which they wrote, using current critical and historical approaches. May be repeated. Prerequisites: Admission to the graduate program in English or by permission of the instructor.

LIT 5486 Literature: Continuity and Change (3). Explores the development of a particular literary genre, ideological concept, or cultural tradition over a broad period of time. May be repeated. Prerequisites: Admission to the graduate program in English or by permission of instructor.

LIT 5487 Texts and Culture (3). The study of the relationship between specified texts and an historically, socially, or conceptually defined culture, such as Vietnam War Narratives, Jewish Literature, or Postmodernism. May be repeated. Prerequisites: Admission to the graduate program in English or by permission of instructor.

LIT 5934 Special Topics (3). A course designed to give groups of students an opportunity to pursue special studies not otherwise offered. May be repeated.

LIT 6934 Special Topics (3). A course designed to give groups of students an opportunity to pursue special studies not otherwise offered. May be repeated.

LIT 6935 Master's Colloquium (3). Individual sections study a specific literary topic, selected and presented jointly by several faculty members. May be repeated. Prerequisites: Admission to the graduate program in

English or by permission of the instructor.

LIT 6970 Master's Thesis (1-6). A thesis is required of all graduate students of English, to be written in the final semester. Done under the supervision of a faculty member. Prerequisites: Admission to the graduate program in English and by permission of the supervising faculty.

Environmental Studies

John Parker, Professor and Chairperson
Bradley Bennett, Associate Professor
Madev Bhat, Assistant Professor
Alice Clarke, Assistant Professor
Constantine Hadjilambrinos, Assistant Professor
Krishnaswamy Jayachandran, Assistant Professor
Joel Heinen, Associate Professor
Fiona Horsfall, Research Scientist
David Lee, Professor
Jack Meeder, Research Scientist
Tom Pliske, Instructor
Gary Rand, Assistant Professor
Mike Ross, Research Scientist

Affiliated Faculty

Jerry Brown, Sociology/Anthropology
George Dalrymple, Biological Sciences
Jim Fourqurean, Biological Sciences
David Genereux, Geology
Joel Gottlieb, Political Science
Kevlin Hill, Political Science
James Huchingson, Philosophy and Religious Studies
Rudolf Jaffe, Chemistry
Jeff Joens, Chemistry
Ronald Jones, Biological Sciences
Farrokh Jhabvala, International Relations
Suzanne Koptur, Biological Sciences
Rod Neumann, International Relations
Steve Oberbauer, Biological Sciences
George O'Brien, Education
Betsy Smith, Social Work
Berrin Tansel, Civil and Environmental Engineering
Joel Trexler, Biological Sciences
Bill Vickers, Sociology/Anthropology

Master of Science in Environmental Studies

The Master of Science in Environmental Studies requires 36 credits, including a thesis (at least 6 credits) based upon the student's original research. A maximum of six credits of post-baccalaureate graduate course work may be transferred from other institutions, subject to approval of the graduate committee. A total of 18 hours of graduate electives is required. Particular courses will be determined by the student in consultation with the advisory committee. At least two of those should be within the Department of Environmental Studies. Approved courses (see below) are subject to change,

and updated lists of these courses are available from the Departmental office.

Additional thesis or research credit, above the 6-credit minimum, may also be applied as elective credit. A maximum of six credit hours may be taken at the 4000 level, and a minimum of six credit hours must be taken in Environmental Studies. Students must demonstrate a competency in Statistics (equivalent to 6 credit hours). Additional course work may be recommended by the advisory committee. A maximum of 5 credit hours of independent study credit (EVR 5907 Graduate Independent Study) may be applied toward graduation.

A grade of 'B' or higher must be obtained in all core courses. A grade of 'C' or higher must be obtained in all courses, with a cumulative GPA of 3.0 or higher in the 36 credits. A thesis must be completed and defended in consultation with the student's graduate thesis committee.

Required Courses

EVR 5320	Environmental Resource Management	3
EVR 5355	Environmental Resource Policy	3
EVR 6950	Graduate Seminar	3
EVR 6971	Master's Thesis	6
LAA 6382	Methods of Environmental Analysis	3

Graduate Concentrations for the Master of Science in Environmental Studies

The Department of Environmental Studies currently offers graduate-level concentrations in three different areas. These are 1.) energy management, and 2.) biological management, and 3.) pollution management. Electives for each of these concentrations are outlined below, as of November, 1996.

Energy Management Concentration

Graduate-level electives within the Department of Environmental Studies:

EVR 5300	Topics in Urban Ecology
EVR 5312	Renewable Energy Sources
EVR 5315	Energy Resources and Systems Analysis
EVR 5353	International Energy Policy

EVR 5410	Women and the Population/Environment Equation
EVR 6322	Methods in Sustainable Resources Management
EVR 6970	Thesis Research
Approved graduate-level electives in other departments:	
ENV 5008	Appropriate Technologies for Developing Countries
ENV 5105	Air Quality Management
ENV 5126	Air Pollution Control
GLY 5246	Geochemistry
GLY 5816	Economic Geology
INR 5935	Environment and Development
PUP 6006	Public Policy Analysis and Evaluation

Biological Management Concentration

Graduate-level electives within the Department of Environmental Studies:

EVR 5067	Tropical Forest Conservation/ utilization
EVR 5300	Topics In Urban Ecology
EVR 5360	Protected Area Management
EVR 5405	International Biological Cons. Accords
EVR 5406	U.S. Endangered Species Management
EVR 5410	Women and the Population/Environment Equation
EVR 6322	Methods In Sustainable Resources Management
EVR 6970	Thesis Research

Approved graduate-level electives in other departments:

BOT 5605	Plant Ecology
BOT 5816	Ethnobotany
BSC 5596C	Environmental Instrumentation
BSC 5825	Wildlife Biology
INR 5935	Environment and Development
OCB 5564	Marine Ecology
PCB 5358	Everglades Research and Resources Management
PCB 5686	Population Biology
PCB 6345	Quantitative Field Ecology
ZOO 5456	Ichthyology

Pollution Management Concentration:

Graduate-level electives within the department of Environmental Studies

EVR 5141	Environmental Nuclear Chemistry
EVR 5236	Air Pollution Dynamics
EVR 5300	Topics In Urban Ecology
EVR 5312	Renewable Energy Sources
EVR 5410	Women and the Population/Environment Equation
EVR 6322	Methods in Sustainable Resources Management
EVR 6970	Thesis Research

Approved graduate-level electives in other departments:

BSC 5596C	Environmental Instrumentation
CHM 5423	Air Chemistry
CHM 5765	Aquatic Chemistry
ENV 5007	Environmental Planning
ENV 5105	Air Quality Management
ENV 5116	Air Sampling Analysis
ENV 5126	Air Pollution Control
ENV 5335	Advanced Hazardous Waste Treatment Processes
ENV 5356	Solid Wastes
ENV 5517	Water and Wastewater Treatment
ENV 5666	Water Quality Management
GLY 5857	Geology for Engineers and Environmental Scientists
INR 5935	Environment and Development

Geology

Gautam Sen, Professor and Chairperson

Bradford Clement, Professor

Laurel Collins, Research Scientist

Charles Connor, Research Associate

Grenville Draper, Professor

David Genereux, Assistant Professor

Rosemary Hickey-Vargas, Associate Professor

Martha Gamper-Longoria, Research Associate

Michael Gross, Assistant Professor

Jose Longoria, Professor

Andrew Macfarlane, Associate Professor

Florentin Maurrasse, Professor

Claudia Owen, Lecturer

Edward Robinson, Research Associate

James Sifers, Assistant Professor

Dean Whitman, Assistant Professor

Huai-Jen Yang, Post-Doctoral Fellow

Eric Zechner, Post-Doctoral Fellow

The department offers the Master of Science Degree and Doctor of Philosophy Degree in Geology with opportunities for concentrated studies in structural geology/ tectonics, igneous petrology/ geochemistry/economic geology, hydrogeology and environmental geology, stratigraphy/sedimentology, paleobiology, and geophysics/ paleomagnetism. In addition, students may select a concentration in the regional geology of Southern Florida, the Caribbean, and Latin America, including problems related to the above-mentioned fields. Overall, the graduate program emphasizes a multidisciplinary approach to solving geologic problems, and stresses the importance of field observation complemented by laboratory analysis.

The department is well-equipped with advanced and basic geological instrumentation. Major on-site analytical facilities are the electron microprobe (ARL/SEM-Q), inductively coupled plasma emission spectroanalyzer (Jobin Yvon 70), and the paleomagnetism laboratory with cryogenic magnetometer. In addition the department owns a complete array of instruments for field geophysics and for field hydrologic studies, and a van for transportation to local field sites. The department has facilities for micropaleontological studies, research in high pressure experimental petrology and exper-

mental structural geology, a class 100 clean laboratory for processing isotopic samples, and a microscopy lab with heating/ freezing stage for fluid inclusion studies. Excellent facilities for chemical analysis of water are also available through formal connections with the Drinking Water Research Center in the College of Engineering and Design.

Application Procedures

Admission decisions to the Program will be made by the Department's Graduate Admission Committee.

To be considered for admission applicants must submit the following documents prior to the admission deadlines.

1. FIU Graduate Application Form.
2. Certified transcripts of all college level work. When applicable, a certified English translation must accompany the original.
3. Graduate Record Examination scores taken within the previous two years, sent from the Education Testing Service.
4. Scores of English proficiency, when applicable, sent from the Education testing service.
5. Curriculum vitae or resume with pertinent information regarding applicant's previous experience and achievements.
6. A statement of Intent, including a brief discussion (not to exceed 2000 words) of educational goals and career projections. The applicant may also include a copy of previous written scientific work.
7. Three letters of recommendation from former professors or academic advisors.

The Graduate Application Form, official transcripts, official GRE and TOEFL scores should be sent directly to the Office of Admissions, Florida International University, Miami, FL 33199, with the application fee. A copy of the application form, together with the curriculum vitae or resume, statement of Intent and letters of recommendation should be sent to the Graduate Coordinator, Department of Geology, Florida International University, Miami, FL 33199.

Admission

To be admitted to the Graduate Program in Geology, a student must meet the following minimum requirements:

1. Hold a Bachelor's or Master's degree from an accredited College or University in a relevant discipline of Sciences, Engineering or Mathematics.
2. Have a grade point average (GPA) of 3.0 or higher (or equivalent) during the last two years of undergraduate program, and 3.0 or higher during the Master's degree program.
3. Have a minimum combined score of 1000 on the verbal and quantitative sections of the Graduate Record Examination (GRE).
4. Provide at least three letters of recommendation from persons qualified to evaluate the applicant's potential for graduate work.
5. Students whose native language is other than English must demonstrate an adequate level of proficiency in English as a foreign language. A score above 500 on the TOEFL (Test of English as a Foreign Language) of the Educational Testing Service, is required.
6. Satisfactorily meet the University's general requirements for admission to graduate programs.

Financial Aid

The Geology Department offers a number of graduate teaching and research assistantships which are awarded each semester on a competitive basis. The assistantships provide a stipend and waiver of tuition. Applicants interested in an assistantship should indicate this on the FIU Graduate Application form. In order to be considered for an assistantship the application should be submitted by February 15 for Fall semester admission and by October 1 for Spring semester admission. Applicants seeking research assistantships should contact individual faculty members in their area of research interest.

Master of Science in Geology

The Master of Science is conferred based on satisfactory completion of required coursework, mastery of a subdiscipline of geology, and the ability to conduct independent research resulting in a Master's Thesis.

Course Requirements:

A minimum of 36 credits including:

GLY 5931/GLY 6932	Graduate Seminars	2
GLY 5286	Research Instrumentation and Techniques in Geology	4
Courses in field of specialization		16
GLY 6971	Thesis	6
Electives		8

Courses in the field of specialization and electives are chosen by the student in consultation with an advisor. All such courses are selected to fit the student's particular professional goals.

Graduation Requirements:

1. A minimum GPA of 3.0 in all course work required for the 36 credits toward the Master's degree.
2. Satisfactory preparation of a thesis proposal and a qualifying examination on general geologic skills and the field of subspecialization. Failure to pass this examination will terminate the student's enrollment in the program.
3. Fulfillment of the foreign language proficiency requirement.
4. Completion and successful defense of a thesis.

Foreign Language Proficiency:

Reading proficiency in a modern foreign language is required of all graduate students. Proficiency is determined by an exam consisting of the clear translation of technical materials into English. As an alternative students may substitute 6 credits of computer science or mathematics beyond Calculus II.

Doctor of Philosophy

The Doctor of Philosophy in Geology is conferred based on satisfactory completion of required coursework, a demonstrated mastery of a broad field of knowledge and the ability to conduct original and independent research. A minimum of 90 credit hours beyond the Bachelor's degree is required for the Ph.D. A minimum of 24 credit hours are devoted to research toward the Ph.D. dissertation. A maximum of 36 credit hours may be transferred from other graduate programs with the approval of the Departmental Graduate Committee.

Course Requirements

GLY 5931/GLY 6932 Graduate
Seminars 2

Formal graduate level courses
(non-research courses chosen in
consultation with the major advisor) 43

GLY 7980 Dissertation
Research 24

The remaining 21 credits may be
either formal graduate level courses,
or independent study and special
projects, selected in consultation
with the major advisor 21

Graduation Requirements

1. A minimum GPA of 3.0 in all
course work required for the master's degree.

2. Satisfactory performance on
qualifying examinations on general
geologic skills and field of subspecialization. Failure to pass this examination will terminate the student's admission in the program.

3. Completion and successful defense of a dissertation. Members of the dissertation committee will be jointly determined by the student's advisor and the Graduate Admission Committee.

Participation in Instructional Activities

All students in the program are required to participate in instructional aspects of the Department as teaching assistants. Specific assignments may include supervision of laboratories, assistance on field trips, or curatorial duties.

Fields of Concentration**Geophysics/Paleomagnetism**

Geophysical investigative techniques using gravity, magnetism, seismic reflection and refraction, earthquake seismology, and thermal properties. Land-based geophysical studies of the Caribbean and South American seismicity and crustal structure.

Hydrogeology/Environmental Geology

Field and modeling approaches to ground-water flow and solute fluxes in subsurface and near subsurface environments. Interaction of surface water and groundwater, solute transport, chemical and isotopic tracing techniques, watershed hydrology in South Florida, other US locations and Central America.

Igneous Petrology/Geochemistry/Economic Geology

Research problems in petrology/geochemistry of igneous and metamorphic rocks with reference to their origin, and relationships in time and space. Origin of hydrothermal and other economic deposits. Field occurrence, geochemistry and petrogenesis of crystalline rocks, especially those of the Caribbean region and South America. Generation of associated (often, economically significant) hydrothermal deposits. Application of trace element and isotope geochemistry to the study of these petrogenetic associations.

Paleobiology

Research applied to taxonomy, phylogeny, evolutionary processes, paleoecology, taphonomy and biostratigraphy as applied to select fossil groups. Zonal distribution, facies analysis, and paleoecology of different groups of fossils. Specialization may be in microfossils, microfossils, applied to several aspects of the paleobiology of particular fossil groups, including biodiversity, paleoecology, response to global climatic changes and time relationships of selected organisms.

Regional Geology

Multidisciplinary geologic research applied to a specific geographic area.

Stratigraphy/Sedimentology

Sedimentary petrology, sedimentary environments, paleo-oceanography, sequence stratigraphy, cyclic stratigraphy, microfacies analysis and basin analysis. Field and laboratory techniques applied to solution of problems in these topics, especially as applied to sedimentary rock sequences of South Florida, the Caribbean and Meso-America. Evolution of the sedimentary basins of these regions and their relationships to global and regional tectonics.

Structural Geology - Tectonics

Field oriented research on methods of structural analysis. Analysis of geologic deformations based upon the principles of mechanics and utilizing research data from laboratory and field investigations of folding, fabrics, fracture and faulting. Structural geology of the Caribbean and South America.

Course Descriptions

Note: Laboratories may not be taken prior to the corresponding lecture course. Laboratories must be taken concurrently where noted, but students must register for the laboratory separately.

Definition of Prefixes

EVS-Environmental Science; GEO-Geography/Systematic; GLY-Geology; MET-Meteorology; OCE-Oceanography; OCG-Oceanography-Geological; OCP-Oceanography/Physical.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

GLY 5021 Earth Sciences for Teachers (3). Study of geological materials and processes, as covered in Physical Geology, but at a higher level and with additional assignments. Prerequisite: Permission of instructor. Corequisite: GLY 5021L. (F,S,SS)

GLY 5021L Earth Sciences for Teachers Laboratory (1). Study of the properties of minerals and rocks; interpretation of topographic and geologic maps; study of the geology of Florida, including field trips. Prerequisite: Permission of instructor. Corequisite: GLY 5021. (F,S,SS)

GLY 5158 Florida Geology (3). Detailed lithostratigraphic and biostratigraphic analyses of Southeast Florida and their relationship to tectonics, paleoclimates. Prerequisite: GLY 3511 and GLY 3511L. (S in alternate years)

GLY 5246 Geochemistry (3).
GLY 5246L Geochemistry Lab (1). Origin of chemical elements and principles affecting their distribution in the solar system, solid earth and hydrosphere. Use of chemical data to solve geologic problems. Prerequisites: Physical Geology and General Chemistry. (F in alternate years)

GLY 5283C Application of ICPES in Geochemistry (3). Determination of elemental abundances in rocks, soils, natural water using inductively coupled plasma emission spectroscopy (ICPES). Instrumental principles, sample selection and preparation methods and application of results to research. Prerequisites: CHM 1045, CHM 1046 or permission of the instructor. (S or SS)

GLY 5286 Research Instrumentation and Techniques in Geology (3). Survey of techniques and instrumentation used in geological research,

including computing and data handling. Prerequisite: Graduate standing or permission of instructor. Corequisite: GLY 5286L. (F)

GLY 5286L Research Instrumentation and Techniques in Geology Lab (1). Introduction to advanced instrumentation and analytical techniques in Geology, including computing and data processing. Prerequisite: Graduate standing or permission of instructor. Corequisite: GLY 5286. (F)

GLY 5298 Topics in Geochemistry (3). Seminar covering current research in selected areas of low-temperature geochemistry: oceans and oceanic sediments; continental waters and sediments; hydrothermal systems. Prerequisite: GLY 4555 or permission of instructor. (F)

GLY 5322 Igneous Petrology and Geochemistry (3). Presentation and discussion of current topics in igneous petrology and geochemistry in a seminar format. Prerequisite: Permission of instructor. (S)

GLY 5335 Metamorphic Geology (3). Metamorphic mineralogy; characteristics of low, medium and high pressure metamorphic rocks; pressure-temperature determinations; metamorphic textures; modeling and determination of P-T-t paths. (F)

GLY 5335L Metamorphic Geology Lab (1). Metamorphic mineralogy; characteristics of low, medium and high pressure metamorphic rocks; pressure-temperature determinations; metamorphic textures; modeling and determination of P-T-t paths. (F)

GLY 5346 Sedimentary Petrology (3). Systematic study of sedimentary rocks. Special emphasis on genetic aspects, geochemistry, paleontology, mineralogy, and microfossils. Emphasizes microscopic study. Prerequisite: GLY 4555. Corequisite: GLY 5346L. (F in alternate years)

GLY 5346L Sedimentary Petrology Lab (1). Laboratory studies of sediments and sedimentary rocks with emphasis on microscopic analyses and geochemical techniques. Prerequisite: GLY 4555 and GLY 4555L. Corequisite: GLY 5346. (F in alternate years)

GLY 5408 Advanced Structural Geology (3). Advanced treatment of the theory of rock mechanics to solve problems of natural rock deformation. Prerequisites: GLY 4400, MAC

3413, or permission of instructor. Corequisite: GLY 5408L. (S)

GLY 5408L Advanced Structural Geology Lab (1). Problem solving in theory of rock deformation. Experimental procedures in rock mechanics. Corequisite: GLY 5408. (S)

GLY 5425 Tectonics (3). Properties of the lithosphere; plate kinematics and continental drift; characteristics of plate boundaries; mountain belts; formation of sedimentary basins. Prerequisites: GLY 1010, 1100, 4400, 4310, 3200 or permission of instructor. (S)

GLY 5446 Topics in Structural Geology and Tectonics (3). Selected advanced topics in structural geology and rock deformation. Latest advances in crustal tectonics. Prerequisite: GLY 5408. (S)

GLY 5455 Physical Volcanology (3). Description of volcanoes and their products, geophysical and tectonic constraints on volcanic processes, and modeling and forecasting of volcanic eruptions. Prerequisite: GLY 4450, GLY 4310 or permission of instructor. (F in alternate years)

GLY 5457 Analysis of Geophysical Data (3). Reduction and interpretation of geophysical data, including time series analysis, continuation of potential fields. Three-dimensional modeling of gravity, magnetic data, integrated geophysical surveys. Prerequisites: GLY 4450, PHY 3048, PHY 3049, MAC 3311, MAC 3312, MAP 3302. Corequisite: GLY 5457L. (F)

GLY 5457L Analysis of Geophysical Data Lab (1). Field and laboratory applications of geophysical techniques. Computer aided analysis and three-dimensional modeling of gravity and magnetic data. Prerequisites: GLY 4450, PHY 3048, PHY 3049, MAC 3311, MAC 3312, MAP 3302. Corequisite: GLY 5457. (F)

GLY 5495 Seminar in Geophysics (3). Detailed investigation of current geophysical techniques, including topics on instrument design. Prerequisite: GLY 5457 or permission of instructor. (S)

GLY 5546 Topics in Stratigraphy (3). Discussion of research projects and/or current literature in stratigraphic correlation as derived from sedimentologic principles and biozonation. Prerequisite: GLY 5346. (F,S)

GLY 5608 Advanced Paleontology I (3). Discussion of current literature and research projects on evolution,

systematics functional morphology, with reports by members of the seminar. Prerequisites: GLY 4650, GLY 5609, or permission of instructor. (F)

GLY 5621 Caribbean Stratigraphic Micropaleontology (3). Microscopic study of biostratigraphic type sections from the Caribbean area. Emphasis on planktonic foraminifera and radiolaria, paleoecologic and paleoclimatic interpretations. Prerequisite: GLY 4650 or permission of instructor. (F)

GLY 5754 Applied Remote Sensing in the Earth Sciences (3). Application of remote sensing and image analysis in the earth sciences; qualitative and quantitative satellite image and air photo interpretation. Emphasis is on use of computer processing packages. Prerequisites: GLY 1010 or consent of instructor.

GLY 5785 Caribbean Shallow-Marine Environments (3). Field study of multiple tropical environments in the Caribbean area. Dynamic processes and coastal evolution in response to natural and human-induced changes.

GLY 5786 Advanced Field Excursion (3). A study of the geology of a selected region of the world followed by 10-12 day field trip in order to study the field relationships of the geologic features. Special emphasis is given to stratigraphic, structural and tectonic relationships of lithic package. Prerequisite: Permission of instructor. (SS)

GLY 5808 Mining Geology (3). Application of theoretical models of ore formation to exploration and the use of geochemical and geophysical techniques in the search for ore deposits. Prerequisites: GLY 4311 and CHM 1046. (F)

GLY 5816 Economic Geology (3). Economically important metal deposits of sedimentary, igneous and hydrothermal origins and their geologic settings and characteristics. Prerequisites: GLY 1010, GLY 4311, CHM 1045, CHM 1046. (S)

GLY 5824 Water-Rock Interaction (3). Survey of geochemical processes at the water-rock interface. Topics include absorption of inorganic and organic ions, colloid stability in groundwater, mineral dissolution and precipitation. Prerequisites: CHM 1046, MAC 3312, GLY 4311 or permission of instructor.

GLY 5826 Hydrogeologic Modeling (3). Techniques used in modeling groundwater flow and solute transport in geologic systems. Case studies of significant aquifers. Prerequisites: GLY 5827, MAP 2302, or permission of instructor. (S,SS)

GLY 5827 Hydrogeology (3). Physics of flow in geological media. Saturated and unsaturated flow, groundwater and the hydrologic cycle, estimating hydraulic parameters of aquifers, introduction to chemical transport. Prerequisite: GLY 1010, MAC 2312, and PHY 2053, or permission of instructor. (F)

GLY 5827L Hydrogeology Lab (1). Laboratory, field, and computer exercises to complement GLY 5827. (F)

GLY 5828 Chemical Hydrogeology and Solute Transport (3). Quantitative analysis of hydrologic, geologic, and chemical factors controlling water quality and the transport and fate of organic and inorganic solutes in the subsurface. Prerequisites: GLY 5827. (S)

GLY 5857 Geology for Environmental Scientists and Engineers (3). Characterization of rocks and rock masses; geological maps; seismic hazards; weathering of rocks; hydrologic cycle; slope stability; coastal processes; geophysical techniques. Course includes field trips in the South Florida region. Prerequisites: CHM 1045, GLY 1010 or permission of instructor. (S)

GLY 5931 Graduate Seminar (1). Presentation or critical examination of current research problems in geology. A selection of topics is considered each term. Topics may also include individual research in the student's field of investigation. Prerequisite: Graduate standing or permission of instructor. (F,S,SS)

GLY 6910 Supervised Research (1-3). Research apprenticeship under the direction of a professor or a thesis advisor. Prerequisites: Full graduate admission and permission of the instructor.

GLY 6159 Stratigraphy of the Circum Caribbean Region (4). Detailed lithostratigraphic and biostratigraphic analyses of Caribbean islands, Central America, northern South America and Caribbean basin. Prerequisite: GLY 5621 or permission of instructor. (SS)

GLY 6247 Trace Element and Isotope Geochemistry (3). Principles of trace

element and isotope fractionation and radioactive decay, and their application to the interpretation of igneous rocks and the chemical evolution of the earth. Prerequisite: GLY 5246 or permission of instructor. Corequisite: GLY 6247L. (F)

GLY 6247L Trace Element and Isotope Geochemistry Lab. (1). Analysis of trace elements in rocks and minerals; use of trace element and isotopic data in solving geologic problems. Prerequisite: GLY 5246 or permission of instructor. (F)

GLY 6328 Advanced Igneous Petrology (3). Interpretation of igneous rocks; chemistry and physics of magma generation and crystallization; origin of major igneous rock series with emphasis on tectonic controls. Prerequisite: Permission of instructor. Corequisite: GLY 6328L. (S)

GLY 6328L Advanced Igneous Petrology Lab (1). Identification of rocks using microscopic and microprobe techniques. Prerequisite: Permission of instructor. Corequisite: GLY 6328. (S)

GLY 6337 Metamorphic Phase Equilibria (3). Theory and methods of calculation of metamorphic phase equilibria and P-T paths using appropriate analysis of composition space, activity models, geothermometry, geobarometry. Origin and interpretation of zoning in metamorphic minerals. Prerequisites: GLY 5335 or permission of instructor. (F)

GLY 6345 Sedimentary Petrography (3). Comparative study and fundamental observations of sedimentary rocks in hand specimens and under the petrographic microscope; their classification, theoretical and practical implications. Prerequisites: GLY 4555 or permission of instructor. (F)

GLY 6345L Sedimentary Petrography Laboratory (1). Laboratory studies of sedimentary rocks in thin section. Prerequisites: GLY 4555 or permission of the instructor. Corequisite: GLY 6345. (F)

GLY 6353 Microfacies Analysis (3)
GLY 6353L Microfacies Analysis Laboratory (1). Identification and interpretation of the fossil and mineralogical constituents of sedimentary rocks in thin section. Emphasis is placed on the paleoecological significance of fossil remains in carbonates. Prerequisites: GLY 4555 or permission of instructor. (S)

GLY 6392 Topics in Igneous Petrology and Geochemistry (3). Research seminar in contemporary petrology and geochemistry. Student presentation on thesis research. Prerequisite: GLY 5322 or permission of instructor. (F,S)

GLY 6417 Caribbean Structural Geology and Tectonics (4). Students will be assigned areas and/or topics to make presentation. These will be introduced and supplemented by lecture material. Prerequisite: GLY 5408. (S)

GLY 6427 Quantitative Geotectonics (3). Application of continuum mechanics and heat transfer to problems in geology. Observational constraints on earth properties. Emphasis is on problems relating to the earth's lithosphere. Prerequisites: GLY 4450, GLY 4400, GLY 5425 and MAP 3302 or permission of instructor. (F in alternate years)

GLY 6444 Quantitative Analysis of Joints and Faults (3). Application of fracture mechanics to geologic problems, including the analysis of local and regional stress fields, bedrock fracture systems, estimation of fracture related strain, and the influence of mechanical properties on rock failure. Prerequisites: GLY 4400, GLY 4450, GLY 5425 or permission of instructor. (F in alternate years)

GLY 6447 Advanced Topics in Structural Geology and Tectonics (3). Detailed exploration of selected research topics in structural geology and tectonics. Prerequisites: GLY 5446 or permission of instructor. (F,S)

GLY 6448 Stress in the Earth's Crust (3). The distribution and magnitude of stress in the earth's crust; laboratory derived values for earth stress, in situ stress measurements, regional stress patterns and sources of stress in the lithosphere. Prerequisites: GLY 4400, GLY 4450, GLY 5425 or permission of instructor. (S)

GLY 6468 Paleomagnetism (3). Physics of rock and mineral magnetism, geomagnetism and paleomagnetism; field and laboratory methods, geomagnetic field behavior, magnetostratigraphy, apparent polar wander. Prerequisite: GLY 4400, GLY 3001 or permission of instructor. Corequisite: GLY 6468L. (F)

GLY 6468L Paleomagnetism Laboratory (1). Physics of rock and minerals magnetism, geomagnetism and paleomagnetism; field and laboratory methods, geomagnetic field behavior.

ior, magneostratigraphy, apparent polar wander. Prerequisite: GLY 4400, GLY 3001 or permission of instructor. Corequisite: GLY 6468.(F)

GLY 6485 Physics of the Earth (3). Properties and dynamics of the Earth's interior studied from a physical perspective. Topics include heat flow, fluid flow, earthquake seismology. Prerequisites: GLY 4450 and MAC 3313. (F)

GLY 6496 Advanced Topics in Geophysics (3). Discussion of research projects and current literature in geophysics. Prerequisite: GLY 5495. (S)

GLY 6592 Basin Analysis (3). Analysis of sedimentary basins based on their origin, paleogeographic evolution and tectonic setting. Emphasis is placed on the tectonic evolution and economic potential of sedimentary basins. (S in alternate years)

GLY 6592L Basin Analysis Lab (1). Analysis of different types of sedimentary basins using a case history approach. Corequisite: GLY 6592. (S in alternate years)

GLY 6595 Topics in Sedimentology (3). Oral presentation by students of research projects and survey of relevant literature with reports by members of the seminar. Prerequisite: GLY 5546. (S in alternate years)

GLY 6626 Stratigraphic Micropaleontology: Foraminifera (3). Nomenclature, taxonomy, and biostratigraphy of Cretaceous and Cenozoic planktonic foraminifera. Studies of stratigraphically important taxa from Caribbean land sections, piston cores, and DSDP/ODP sites. Prerequisites: GLY 5621 or permission of instructor. (F in alternate years)

GLY 6627 Stratigraphic Micropaleontology: Radiolaria (3). Nomenclature, taxonomy and biostratigraphy of Cretaceous and Cenozoic radiolaria. Studies of stratigraphically important taxa using Caribbean land sections, piston cores, and DSDP/ODP sites. Prerequisites: GLY 5621 or permission of instructor. (S in alternate years)

GLY 6628 Stratigraphic Micropaleontology: Calcareous Nannofossils (3). Nomenclature, taxonomy, and biostratigraphy of Triassic to Recent nannofossils. Intensive training of identification of marker taxa using land and DSDP/ODP sites. Prerequisites: GLY 5621 or permission of instructor. (S in alternate years)

GLY 6690 Topics in Paleontology (3). Oral presentation and discussion of current research projects and relevant literature, with reports by members of the seminar. Prerequisite: GLY 5608 or permission of instructor. (F)

GLY 6809 Hydrothermal Geochemistry (3). The mineralogy, thermodynamics, chemistry and isotope chemistry of hydrothermal and geothermal systems, with an emphasis on the transport of solutes in hydrothermal solutions and ore-forming processes. Prerequisites: GLY 5246, CHM 3400 or permission of instructor. (S in alternate years)

GLY 6829 Advanced Topics in Hydrology (1-3). Research-oriented seminar course involving analysis of several contemporary topics chosen from the current literature in hydrology. Specific topics vary. May be repeated. Prerequisites: GLY 5827 and one other graduate level hydrology/hydrogeology course, or permission of instructor. (S in alternate years)

GLY 6862 Numerical Methods in the Earth Sciences (3). Numerical techniques used by geoscientists, with emphasis on finite-difference and finite-element techniques to solve equations governing fluid flow and mass transport in geological systems. Prerequisites: MAP 3302, GLY 5827 and knowledge of one programming language or permission of instructor.

GLY 6931 Advanced Graduate Seminar (1). Oral presentation and discussion by students of an assigned literature survey, with reports by members of the seminar. Prerequisite: GLY 5931 or permission of the instructor. (F,S)

GLY 6941 Supervised Teaching in the Geosciences (1). Teaching a geological discipline under the supervision of departmental faculty. Prerequisite: Graduate standing.

GLY 6966 Master's Comprehensive Examination (0). Oral and written examinations on knowledge in general geology and the student's field of concentration. Schedule to be selected in consultation with the Graduate Committee. Prerequisite: Advanced graduate standing. (F,S,SS)

GLY 6971 Master's Thesis (1-12). Field and/or laboratory research project toward thesis. Selected in consultation with major professor. Prerequisite:

Permission of major professor. (F,S,SS)

GLY 7980 Dissertation (1-12). Field and/or laboratory research directed towards completion of the doctoral dissertation. Selected in consultation with major professor. Prerequisite: Permission of major professor. (F,S,SS)

OCG 6105 Advanced Marine Geology (3).

OCG 6105L Advanced Marine Geology Lab (1). Application of geophysical and geological data to the interpretation of the earth's crust under the oceans, including the data provided by the Deep-Sea Drilling Project, dredging, piston-coring, gravity magnetism, and seismicity. Special emphasis will be given to the genesis and evolution of the Atlantic and Caribbean margins, and their potential for oil resources. Prerequisite: GLY 4730 or permission of instructor. (F in alternate years)

OCG 6664 Paleooceanography (3). Mesozoic/Cenozoic development of the major ocean basins, their circulation and sedimentation history. Use of micropaleontologic and stable isotopic techniques in paleoceanographic analysis. Prerequisite: GLY 4730 or permission of instructor. (F in alternate years)

History

N. David Cook, *Professor and Chairperson*

Daniel A. Cohen, *Associate Professor*

Manuel Moreno Fraginals, *Professor Emeritus*

Christopher Gray, *Assistant Professor*

Mitchell Hart, *Assistant Professor*

Sherry Johnson, *Assistant Professor*

Alan Kahan, *Associate Professor*

Howard Kaminsky, *Professor Emeritus*

Eric J. Leed, *Professor*

Alex Lichtenstein, *Assistant Professor*

and Director of Graduate Studies

Felice Lifshitz, *Associate Professor*

Joseph F. Patrouch, *Assistant*

Professor and Director of Graduate Studies

Brian Peterson, *Associate Professor*

Joyce S. Peterson, *Associate*

Professor and Associate Dean

Darden Asbury Pylon, *Professor*

Howard B. Rock, *Professor*

Mark D. Szuchman, *Professor and Associate Dean*

Clarence Taylor, *Associate Professor*

Victor M. Uribe, *Assistant Professor*

William O. Walker III, *Professor*

Master of Arts in History

The Department of History offers the M.A. degree, with concentration in one of four culture areas: United States, Africa, Europe, and Latin America. Students will chose to follow either a thesis or a report track, in consultation with the Department's Graduate Advisor. Students must make their selection either prior to registering for their first Research Seminar or before completing the first twelve (12) semester-hours toward the degree, whichever comes first. The degree requirements for the M.A. vary somewhat, according to the option taken.

Entrance Requirements

Requirements for admission into the M.A. degree program in History are the same regardless of the option selected. Applicants must also satisfy any additional requirements the University sets for admission to graduate work. Applications should include transcripts from any postsecondary institutions attended, GRE scores, and two (2) letters of recommendation.

Applicants seeking entrance for the Fall Term should prepare all application materials in time for the Department of History to receive them no later than February 15. Appli-

cants will be notified of the Department's decision regarding their application no later than March 15.

Application materials from individuals seeking entrance for the Spring Term must be received by the Department of History no later than October 15. Applicants will be notified of the Department's decision no later than November 15.

1. Applicants to the M.A. degree program in History must have an undergraduate average of 3.0 (on a 4.0 scale) and score 1000 or better in the Graduate Record Examination. The GRE must be taken within three years prior to the application.

2. Two letters of recommendation. Applicants should ensure that each letter on their behalf is signed by the author along the sealed flap of the envelope. Letters should be mailed directly to the Graduate Advisor, Department of History.

3. Applicants must have completed 12 semester-hours of credit (on the basis of 3-hour courses) in undergraduate courses in History.

Any applicant with fewer than twelve (12) semester-hours of undergraduate courses in History may be accepted provisionally and take a maximum of nine (9) semester-hour credits by registering for courses under the category of Special Student (consult the University Catalog and the Office of Admissions). After completing nine semester-hours of undergraduate course work in History with no grade lower than a 'B' (3.0), the student may apply for regular admission. The application will be reviewed by the Department's Graduate Advisor, in consultation with the Department's faculty. The GRE and GPA scores are only minimum requirements. All applications are reviewed by the Graduate Studies Committee which makes the final admissions decision.

Degree Requirements

Thesis Option

1. A minimum of 30 semester-hours for the degree, including a maximum of six semester-hours of Thesis Research. All coursework must be taken at FIU.

2. A minimum of 24 semester-hours of coursework.

3. Two Research Seminars (6 semester-hours).

4. Reading competence in a foreign language. Language competency is assessed by the faculty, of the Department of History, as appropriate. Courses required to meet the language competency requirement do not count toward the degree. The Latin American concentration requires proficiency in Spanish or Portuguese; the European concentration in Spanish, French or German; the United States concentration in any of the above.

5. All students are required to take HIS 6059 (Historical Methods).

6. All students are required to take a Historiography course to be offered in alternate semesters with Historical Methods.

7. The following limits are placed in accumulating credits toward the M.A. degree:

a. No more than three semester-hours of HIS 5908 (Independent Study) are permitted.

b. Students must receive the grade of 'B' (3.0) or better in order for any course to count toward the degree.

c. A maximum of six semester-hours of HIS 5930 (Special Topics).

d. Students are prohibited from taking more than one Research Seminar per semester.

e. Students are prohibited from taking graduate-level cross-listed courses that they have already taken at the undergraduate level.

8. Core Area. Students will select one core area for concentration in United States History, European History, or Latin American History, in consultation with the Graduate Advisor. Twelve semester-hours of course work will be taken within the core area.

9. Breadth Areas. Students will take six semester-hours in breadth areas. These may be courses taken within the Department of History that are outside the culture area of concentration, or in associated disciplines outside of the Department (with the approval of the Graduate Advisor), or a combination of the two.

10. Students will register for up to six semester-hours of HIS 6970 (Thesis Research).

11. The thesis must be successfully defended and formally approved by a Supervisory Committee com-

posed of three members of the Department of History. The Supervisory Committee is convened and headed by the thesis supervisor. In cases of cross-disciplinary research, an external reader from a different department may form part of the Supervisory Committee, substituting for one member from the Department of History.

12. The degree candidate will prepare the thesis in accordance to the regulations stipulated in the University's Graduate Policies Manual. The degree will be conferred after the approval of the final version of the thesis by the Office of the Dean of the College of Arts and Sciences.

Report Option

1. A total of 30 semester-hours of course work are needed for the M.A. degree. The report option does not set requirements of the Core/Breadth area distribution. Students will design their distribution needs in consultation with the Graduate Advisor and the relevant faculty. All courses must be taken in the Department of History, at FIU.

2. A minimum of two Research Seminars (6 semester-hours) must be taken. Only Research Seminar papers (2) that secure relevant faculty approval may be submitted to the Graduate Advisor for process of final approval.

3. The following limits are placed on accumulating credits towards the Master's degree:

a. Students must receive the grade of 'B' (3.0) or better for the course to count toward the degree.

b. HIS 5908 (Independent Study) is limited to three semester-hours.

c. HIS 5930 (Special Topics) is limited to six semester-hours.

4. HIS 6059 (Historical Methods) is required of all students.

Three semester hours in Historiography is required of all students.

Core Courses

The following courses count for both the Thesis and the Report options:

AFH 5905	Readings in African History
AFH 5935	Topics in African History
AFH 6915	Research in African History
AMH 5905	Readings in American History

AMH 5935	Topics in American History
AMH 6915	Research in American History
EUH 5905	Readings in European History
EUH 5935	Topics in European History
EUH 6915	Research in European History
LAH 5905	Readings in Latin American History
LAH 5935	Topics in Latin American History
LAH 6915	Research in Latin American History
HIS 5289	Comparative History
HIS 5930	Special Topics
HIS 5908	Independent Study
HIS 5910	Advanced Research Seminar

Consultation with the Graduate Advisor is required before registering for the following courses:

HIS 6059	Historical Methods
HIS 6970	Thesis Research

Doctor of Philosophy in History

The doctoral program in History offers students opportunities to concentrate on the areas of Latin America, Africa, the United States, or Europe. The program contains an underlying comparative framework based on the civilizations of the Atlantic, which allows students to explore the many dimensions of crosscultural exchanges. The curriculum thus emphasizes the comparative framework around the Atlantic experience, and reflects the vitality of a cross-disciplinary approach.

Admission to the Program

Every applicant must supply copies of a curriculum vitae, college transcripts, and at least two letters of recommendation. Admission requires a minimum of 1100 combined Verbal and Math GRE scores, and a minimum undergraduate GPA of 3.0. Applicants with M.A. degrees are required to have a graduate GPA of at least 3.25. The GRE History specialty examination is not required, but scores may be submitted if available. For students whose native language is not English, the TOEFL exam is required, with a score of at least 575. A writing sample should be included in the application. For those transferring into the program who already hold the MA,

the thesis, when available, should be submitted as the sample. Finally, a short statement addressing the student's goals and objectives in pursuing the doctorate in history is also required.

Applicants seeking entrance for the Fall Term should prepare all application materials in time for the Department of History to receive them no later than February 15. Applicants will be notified of the Department's decision regarding their application no later than March 15.

Application materials from individuals seeking entrance for the Spring Term must be received no later than October 15. Applicants will be notified of the Department's decision no later than November 15.

Degree Requirements

Number of Credits and Nature of Required Courses

A minimum of 60 semester-hours of credit are required beyond the Master of Arts degree of which 9 to 12 credits will be taken as a common core consisting of: historiography and/or historical methods, an introductory reading seminar in Atlantic Civilization, and a research seminar in Atlantic Civilization. A further 18 credits are required in the student's core culture area to be chosen from the United States, Latin America, Africa, or Europe. An additional 12 credits are required in geographical/topical areas outside the culture area of concentration. These out-of-area distribution courses may be taken in either History or a cognate discipline. A maximum of 24 hours of credit is required for the dissertation.

Language Requirements

The language requirement may be fulfilled in one of two ways: 1) thorough knowledge of one foreign language and reading knowledge of another are required of all students; or 2) students may demonstrate knowledge of one language and competency in social science quantitative skills. Language requirements vary, according to the concentration fields. In cases where the dissertation will be in the history of US or English-speaking countries, one language plus the quantitative skill is sufficient. In Latin American history, Spanish and Portuguese are expected. Students should check with the Department's Director of Graduate Studies to determine which lan-

guages are appropriate for their program of studies.

Composition of Course Work

A minimum of 60 semester-hours of work after completion of the Master's degree in History are required, of which a maximum of 24 hours are permitted for the doctoral dissertation. The courses form part of the student's development in the field, factual and interpretive, in preparation for the comprehensive written and oral examinations to qualify for doctoral candidacy. A minimum of 27 hours of residency (e.g., three semesters for full-time students) is expected prior to filing for the qualifying examinations. The student may, in consultation with the faculty, decide that more work is necessary before the exams are attempted. The standard course load of nine hours per semester means that the qualifying examinations will usually be administered near the end of the second year of residency, or at the beginning of the third year.

Course Requirements beyond the Master's degree:

Common Core	9
Culture Area Concentration	18
Out-of-Area Distribution	12
Dissertation	24
Total	63

Common Core Courses: (9)

Historiography
Historical Methods
Advanced Readings in Atlantic Civilization
Research in Atlantic Civilization

'Historiography' and 'Historical Methods' may be transferred from a Master of Arts Program, with the approval of the Graduate Committee.

Culture Area Concentration

Courses: (18 credits minimum from either AFH, AMH, EUH, or LAH core below).

Readings in African History
Readings in American History
Readings in European History
Readings in Latin American History
Advanced Readings in American History
Advanced Readings in European History
Advanced Readings in Latin American History
Research in African History
Research in American History
Research in European History

Research in Latin American History

General field concentration: (18 credits from either AFH, AMH, EUH, or LAH below).

Out-of-Area Distribution Courses:

(12 credits outside general field concentration or in other departments).

Dissertation Research: (18-24 credits)

The time needed for the research and writing of dissertations in History is variable, although doctoral candidates normally spend one year engaged in continuous field research and a second year in full-time writing. The program expects students to devote a minimum of 18 hours to activities related to the dissertation subsequent to candidacy, that is, after passing the Comprehensive Examinations.

Comprehensive Examinations and the Dissertation.

Following completion of all coursework and language competencies, students will be required to pass a written and an oral comprehensive examination, and to write a dissertation. Exams will be administered, as needed, no more than two times each year. Students should consult the Director of Graduate Studies for the date of the exams. The exams will cover knowledge in four fields: 1) a general field; 2) a period/geographical subfield; 3) a comparative field; 4) a methodological and/or interdisciplinary field.

Restrictions

1. The grade of "B" or better is required for graduate credit.
2. At the end of the second semester of residence, or upon completion of the first 18 credit-hours of work, the Graduate Committee will examine and evaluate the student's progress and prospects. Professors will provide detailed written evaluations of the work of all first-year Ph.D. students they have taught. Students whose progress is deemed insufficient will be advised to withdraw from the program.

Course Descriptions

Definition of Prefixes

AFH-African History; AMH-American History; EUH-European History; HIS-General; LAH-Latin American History; WOH-World History.

AFH 5905 Readings in African History (3).

An examination of historiographical

cal traditions within African history. Topics will vary; with a change in theme, the course may be repeated. Prerequisite: Graduate standing.

AFH 5935 Topics in African History (3).

An examination of specific themes in African history. Topics will vary. With a change in theme, the course may be repeated. Prerequisite: Graduate standing.

AFH 6915 Research in African History (3).

Research in primary and secondary sources on African History. Subjects may vary. May be repeated with departmental approval. Prerequisite: Graduate standing.

AMH 5905 Readings in American History (3).

Students read books from different historiographical traditions and with conflicting interpretations about an important subject in American history. Subjects will vary according to professors. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

AMH 5935 Topics in American History (3).

An examination of specific themes or topics in American history. The theme will vary from semester to semester. With a change in theme, the course may be repeated. (The theme will be announced in the yearly schedules.) Prerequisite: Graduate standing.

AMH 6906 Advanced Readings in American History (3).

Detailed analysis of a selected topic in American History. May be repeated as topics vary. Prerequisite: Graduate standing.

AMH 6915 Research in American History (3).

Students conduct research in primary and secondary sources on aspects of important subjects in American History. Subjects will vary according to professor. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

EUH 5905 Readings in European History (3).

Students read books from different historiographical traditions and with conflicting interpretations about an important subject in European history. Subjects will vary according to professors. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

EUH 5935 Topics in European History (3).

An examination of specific themes or topics in European history. The theme will vary from semester to

semester. With a change in theme, the course may be repeated. (The theme will be announced in the yearly schedules.) Prerequisite: Graduate standing.

EUH 6906 Advanced Readings in European History (3). Detailed analysis of a selected topic in European history. May be repeated as topics vary. Prerequisite: Graduate standing.

EUH 6915 Research in European History (3). Students conduct research in primary and secondary sources on aspects of important subjects in European History. Subjects will vary according to professor. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

HIS 5289 Comparative History (3). A study of specific topics in history that cut across regional, national, and chronological lines. The topics will change from semester to semester, and with a change in content, the course may be repeated. (The topic of the course will be announced in the yearly schedule.) Prerequisite: Graduate Standing.

HIS 5908 Independent Study (VAR). Individual conferences, assigned readings and reports on independent investigations, with the consent of the instructor. Prerequisite: Graduate Standing.

HIS 5910 Advanced Research Seminar (3). Small group sessions will analyze particular subject areas in history, with the consent of the instructor. Prerequisite: Graduate Standing.

HIS 5930 Special Topics (3). An examination of specific themes or topics in history. The theme will vary from semester to semester, and with a change in content, the course may be repeated. (The theme will be announced in the yearly schedule.) Prerequisite: Graduate Standing.

HIS 5940 Supervised Teaching (1-3). The students will work under the close supervision of a regular member of the faculty in a mentorship fashion. The supervision will cover various aspects of course design and delivery in History. Prerequisite: Graduate Standing.

HIS 6059 Historical Methods (3). A seminar designed to introduce the beginning graduate student to the technical aspects of the study of his-

tory. Prerequisite: Graduate Standing.

HIS 6159 Historiography (3). An introduction to the discipline of history, with primary and secondary readings allowing exploration of the evolution of historical schools of thought over several generations. Prerequisite: Graduate standing.

HIS 6906 Advanced Readings in Atlantic Civilization (3). A team-taught, comparative course dealing with the interactions between at least two of the geographical fields of concentration. May focus on one or more topics. Required of all students during their first term of studies in program. Prerequisite: Graduate standing.

HIS 6918 Research in Atlantic Civilization (3). A research seminar on cross-cultural topics, involving the comparative method. Required of all Ph.D. students in the program, second term of residence. Topics will vary. Prerequisite: Graduate standing.

HIS 6970 Thesis Research (1-10). Research toward completion of Master's Thesis. May be repeated. Prerequisite: Permission of Department.

HIS 7972 Dissertation Research (1-9). Research towards the completion of a doctoral dissertation. May be repeated. Prerequisite: Admission to Doctoral Candidacy.

HIS 7980 Dissertation (1-9). Completion of Doctoral Dissertation. Prerequisite: Admission to Doctoral Candidacy.

LAH 5905 Readings in Latin American History (3). Students read books from different historiographical traditions and with conflicting interpretations about an important subject in Latin American history. Subjects will vary according to professors. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

LAH 5935 Topics in Latin American History (3). An examination of specific themes or topics in Latin American history. The theme will vary from semester to semester. With a change in theme, the course may be repeated. (The theme will be announced in the yearly schedules.) Prerequisite: Graduate standing.

LAH 6906 Advanced Readings in Latin American History (3). Detailed

analysis of a selected topic in Latin American History. May be repeated as topics vary. Prerequisite: Graduate standing.

LAH 6915 Research in Latin American History (3). Students conduct research in primary and secondary sources on aspects of important subjects in Latin American History. Subjects will vary according to professor. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

International Relations

Damian J. Fernandez, Associate Professor and Chairperson

Ken I. Boodhoo, Associate Professor

Thomas A. Breslin, Associate Professor

John F. Clark, Assistant Professor

Ralph S. Clem, Professor

Emily Copeland, Assistant Professor

Peter R. Craumer, Assistant Professor

Farrokh Jhabvala, Professor

Antonio Jorge, Professor

Paul Kowert, Assistant Professor

Charles G. MacDonald, Professor

Mohiaddin Mesbahi, Associate Professor

Rod Neumann, Assistant Professor

Nicholas G. Onuf, Professor and Director of Graduate Studies

Patricia L. Price, Assistant Professor

Ellisabeth Prugl, Assistant Professor

Susan E. Waliz, Professor

Gregory B. Wolfe, Professor

Florida International University's Ph.D. program in International Relations offers a unique approach to the study of continuity and change in global affairs from a variety of disciplinary perspectives. It provides students with a solid theoretical foundation while allowing individual latitude for rigorous research in a wide range of world problems. Our multidisciplinary approach encourages critical analysis of issues from diverse points of view. Doctoral students can look forward to working closely with a dynamic faculty in an expanding program of growing international reputation.

Admission Requirements

A Bachelor's or Master's degree from an accredited institution of higher education.

Students should meet the following criteria: a minimum of 3.2 GPA (for students holding a B.A.) and a 3.5 (for students holding a M.A.) and a combined (verbal and quantitative) score of 1100 in the GRE. For students whose native language is not English a minimum score of 500 in the TOEFL is required.

Students must complete the admissions process before their applications is considered by the Admissions Committee. A complete file includes: 1. Admissions application (and fee); 2. official transcripts from all institutions attended; 3. a two page statement of intent; 4. three recommendations (in forms provided by the department), and

5. GRE score. The admissions form, fee, transcripts and GRE score should be submitted to the Admissions Office of the University. The other material should be sent directly to the Department.

Deadline: February 15 (for students interested in being considered for assistantships) and April 15. Applications will be reviewed only in the Spring term for Fall admission.

Assistantships, Fellowships, and Financial Aid

The Department awards a number of assistantships which cover most of the tuition costs and carry a stipend (for 20 hours of research or teaching). Assistantships are renewable based on satisfactory academic progress. Students interested in the Caribbean may qualify, and are encouraged to apply, for the Mellon Foundation Fellowship sponsored by FIU's Latin American and Caribbean Center. In addition, all students can apply for financial aid through the university's office of Financial Aid.

Advising

All first year students will be advised initially by the Director of the Ph.D. program. Prior graduate academic work will be reviewed by the Department's Graduate Committee. The Committee will decide issues of transfer of credits and additional preparatory work required. During the first year students will choose an advisor based on the student's and faculty's research interests.

The Advisory Committee has the option to discuss issues of academic progress with particular students who are not meeting the program's expectations.

Degree Requirements

The Ph.D. requires 90 credit hours of work. The 90 hours include:

a. Core Courses (required of all students): (18 credits)
International Relations Theory I
International Relations Theory II
Dynamics of International Relations
In the Twentieth Century
International Political Economy
Research Seminar I (Methodology)
Research Seminar II (Epistemology and Research Design)

b. Two functional fields: (21 credits): A major (12 credits) and a minor (9 credits) field. Students choose their two fields of concentration from the three the Department offers: Development Studies, Foreign Policy and Security Studies, and in-

ternational institutions and Structures.

c. Electives, Independent Studies, Directed Readings: 27 credits

d. Dissertation: 24 credits

Transfer of Prior Graduate Credits

The Graduate Advisory Committee will decide on transfer of credits on a case by case basis upon review of the documentation required (transcripts, syllabi, papers). The maximum number of credits that can be transferred is 36.

Comprehensive Exams

After satisfactory completion of coursework, all students will take comprehensive exams before starting work on the dissertation; that is, before being admitted to candidacy. The comprehensive exams will cover core courses and functional fields.

Language Requirement

All students must pass a foreign language exam to assess language competency.

Dissertation

After passing the comprehensive exams, students are admitted to candidacy and start work on the dissertation. At this point students enroll for dissertation credits under the supervision of their dissertation advisor.

Course Descriptions

Definition of Prefixes

GEA-Geography-Regional (Area); GEO-Geography-Systemic; INR-International Relations; PUP-Public Policy.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

GEO 5415 Topics In Social Geography (3). Topics discussed include geographic aspects of population and ethnicity, with emphasis on sources and analysis of data and pertinent concepts. Prerequisite: GEA 3000 or permission of instructor. (S)

INR 5086 Islam In International Relations (3). Analysis of the role of Islam in shaping the dynamics of contemporary international relations. Emphasis on the ideological, cultural, and political role of Islamic movements and states, and their relations with the West. (F)

INR 5087 Ethnicity and the Politics of Development (3). This course exam-

ines the conceptual and substantive dimensions of ethnicity in the context of world politics and political development. The course will highlight ethnicity and ethnic groups as critical factors in North-South politics. (S)

INR 5255 Seminar in African Development (3). Examines political, economic and social development in Sub-Saharan Africa in an international context. Introduces students to sources for research in African international development. Prerequisites: Undergraduate course on Africa or graduate status.

INR 5315 Foreign Policy Analysis (3). Comparative examination of theories of foreign policy making, emphasizing the international, domestic, and organizational contexts in which national policies are formulated and enacted. Prerequisites: Graduate standing or permission of instructor. (F)

INR 5409 International Law I (3). Role of international law in the relations of states; nature, development, theory, sources of law; international personality; jurisdiction, including territory and nationality; dispute settlement. (F)

INR 5507 International Organizations I (3). Study of international organizations and their role in international relations. Emphasis on their legal status, rule-making capacities and role in dispute settlement and maintenance of peace. (S)

INR 5607 International Relations and Development (3). An analysis and conceptualization of the process of development as it takes place in the international context. Special attention given to the role of international organizations in promoting development and the manner in which differences in developmental levels conditions international relations. (S)

INR 5906 Independent Study (VAR). Directed independent research. Requires prior approval by instructor. (F,S,SS)

INR 5935 Topics in International Relations (3). Varies according to the instructor. (F,S,SS)

INR 6008 Colloquium in International Studies (3). A systemic and International Relations theory supplemented with a consideration of legal, institutional and developmen-

tal issues. Prerequisite for MIB students: INR 6603 (World Politics). (S)

INR 6056 Environment and Development (3). Examines the relationship of development and the environment from a social theory perspective. Emphasizes Third World problems such as deforestation and soil erosion. (S)

INR 6089 International Relations and Human Rights (3). Examination of national and international factors affecting respect for human rights. Special emphasis on international human rights groups, foreign policy, and politics of policy implementation. (S)

INR 6107 U.S. Foreign Policy (3). Examines the structures and processes that shape U.S. policy toward other nations. Topics include: systemic constraints, state/society relations, interest groups, bureaucracy, and leadership. (F)

INR 6209 Comparative Foreign Policy of Latin America (3). Theories, history, and political-economic dynamics of Latin American foreign policies and international relations. (S)

INR 6266 Seminar in Russian Foreign Policy (3). Close analysis of the theoretical foundation and policy evolution of Soviet/Russian role in international affairs of the 20th century. (S)

INR 6338 Seminar in Strategic Studies (3). Close analysis of key traditional and non-traditional concepts of the field of Strategic Studies, i.e. the genesis of power, war and peace, security and their relevance to and impact on International Relations. (S)

INR 6402 International Law II (3). The course, which is the second of a two course graduate sequence, focuses on special topics, e.g., treaties, state responsibility, force and jurisdiction. Prerequisite: International Law I.

INR 6604 International Relations Theory I (3). An analysis of the traditional approaches to international relations theory, beginning with the classic works in the field. Emphasizes the philosophical and normative underpinnings of realism, idealism, liberalism and radicalism. (F)

INR 6605 Contemporary International System (3). Study of synthetic review of theories of development and approaches to the study of de-

velopment as a process of social, political, and economic change. Prerequisites: CPO 5036 and ESC 5025. (S)

INR 6606 Political Psychology of International Relations (3). Study of psychological explanations for political behavior in international relations. Topics include: cognitive, motivational, and bureaucratic decision theories; leadership; and public opinion. (F)

INR 6608 International Relations Theory II (3). Surveys contemporary theories of International Relations, including neo-realism, theories of co-operation among states, approaches to international political economy, and critical theories. (S)

INR 6609 Dynamics of International Relations in the 20th Century (3). Surveys the 20th century's large events and important tendencies decade by decade, as registered by intellectual and policy elites at the time. (S)

INR 6706 Political Economy of International Relations (3). Examines contemporary theoretical and policy debates in the area of international political economy. Reviews key concepts, theories and approaches used in the study of IPE. Prerequisites: INR Theory I or permission of instructor. (F)

INR 6975 Thesis (1-6). Registration for students working on their thesis. Prerequisites: All other coursework for the Master's in International Studies. (F,S,SS)

INR 7980 Dissertation Research in International Relations (1-9). Supervised research on an original research project to be submitted in partial fulfillment of doctoral degree requirements. Prerequisite: Admission to candidacy.

International Studies

Nicholas Onuf, *Director,*
International Studies

Participating Departments:

Economics

Environmental Studies,

History

International Relations

Political Science

Sociology and Anthropology

Master of Arts in

International Studies

The Masters program in International Studies is an interdisciplinary program designed to prepare students for careers in government, the private sector, or international agencies. The program may also be suitable preparation for doctoral instruction in several disciplines. Students major in one of three fields by taking 15 credit hours of required coursework in that field. These fields are: Development Studies, Foreign Policy, International Relations. In consultation with Director, students then develop regional or functional specializations by choosing at least three, thematically related courses from the graduate course offerings of the six departments participating in the program. Scholarships and assistantships are available.

Admission Requirements

A 3.0 GPA in upper-level work from an accredited institution and a combined score of 1000 on the Graduate Record Examination. Foreign applicants must be eligible for further study in their own country and must demonstrate proficiency in the English language.

Degree Requirements

The Master of Arts in International Studies requires a minimum of 36 semester hours of course work at the graduate level. Students may also have to satisfy prerequisites at the undergraduate level for some courses in the program. Such courses will not be counted toward the 36 hour minimum requirement. (A maximum of six semester hours of graduate coursework may be transferred from other institutions of higher education subject to the approval of the Interdepartmental Advisory Committee).

Field Requirements (15)

Development Studies

CPO 5035	Politics of Development	3
ECS 5025	Economic Problems of Emerging Nations	3
INR 5607	International Relations and Development	3
POS 5706	Research Methodology	3
SYP 5447	Sociology of International Development	3

Foreign Policy

INR 5105	American Foreign Policy (Political Science)	
	or	
INR 6107	U.S. Foreign Policy (International Relations)	
INR 5335	Comparative Foreign Policy	
INR 6338	Strategic Studies	
POS 5045	Seminar in American Politics	
POS 5706	Research Methodology International Relations	
INR 5007	Seminar in International Politics (Political Science)	
	or	
INR 5604	International Relations Theory I (International Relations)	
INR 6608	International Relations Theory II	
INR 6	Dynamics of International Relations in the 20 th Century	
INR 5706	Seminar in International Political Economy (Political Science)	
	or	
INR 6706	Political Economy of International Relations	
POS 5706	Research Methodology	

A minimum of five graduate level courses offered by the six departments participating in the program. Elective courses may be taken in other departments with the approval of the Director. Students must take elective courses in at least three different departments.

Thesis or Comprehensive Exams (6)

The thesis option will normally be undertaken after completion of a major portion of the coursework and the approval of a thesis proposal. The thesis must demonstrate an ability to organize existing knowledge, synthesizing the available information from more than one discipline, and focusing that knowledge to illuminate a problem, policy, or theory in International Studies. Students who do not pursue the thesis option must take six additional credits (for a total of 36) and a comprehensive exam.

Language Requirement

Prior to graduation, all students must demonstrate competency in the use of a modern foreign language. Language courses cannot count for credit in the program.

Latin American and Caribbean Studies

Irma Alonso, *Professor, Economics*

Ken Boodhoo, *Associate Professor, International Relations*

Jau Robert Cadely, *Assistant Professor, Modern Languages*

Isabel Castellanos, *Associate Professor, Modern Languages*

Janet Chernela, *Associate Professor, Sociology/Anthropology*

Noble David Cook, *Professor, History*

Damian Fernandez, *Professor, International Relations*

Eduardo A. Gamarra, *Associate Professor, Political Science*

Ivelaw Griffith, *Associate Professor, Political Science*

John B. Jensen, *Associate Professor, Modern Languages*

Sherry Johnson, *Assistant Professor, History*

Santiago Juan-Navarro, *Assistant Professor, Modern Languages*

Bruce Kelley, *Assistant Professor, Economics*

A. Douglas Kincaid, *Associate Professor, Sociology/Anthropology*

Kathleen Logan, *Associate Professor, Sociology/Anthropology*

Anthony P. Maingot, *Professor, Sociology/Anthropology*

Raul Moncarz, *Professor, Economics*

Dario Moreno, *Associate Professor, Political Science*

Lisandro Perez, *Associate Professor, Sociology/Anthropology*

Patricia Price, *Assistant Professor, International Relations*

Ana Roca, *Associate Professor, Modern Languages*

Mark B. Rosenberg, *Professor, Political Science*

Jorge Salazar-Carrillo, *Professor, Economics*

Alex Stepick, *Professor, Sociology/Anthropology*

Mark D. Szuchman, *Professor, History*

Richard Tardanico, *Associate Professor, Sociology/Anthropology*

Victor Uribe, *Assistant Professor, History*

William Vickers, *Professor, Sociology/Anthropology*

Maida Watson, *Professor, Modern Languages*

Maria Willumsen, *Associate Professor, Economics*

Theodore Young, *Assistant Professor, Modern Languages*

The Master of Arts in Latin American and Caribbean studies is a multidisciplinary program. It responds to the diversity of disciplinary and subdisciplinary approaches to the study of Latin America and the Caribbean. The program will prepare students for doctoral-level studies in academic disciplines and for careers in the public and private sectors. Full-time students can be expected to complete the program, including thesis, in 18-24 months.

Admission Requirements

Applicants must meet the following minimum admissions requirements:

1. A baccalaureate degree from an accredited institution for higher education, or equivalent.
2. A grade-point average of at least 3.0 on a 4.0 scale (or equivalent) for the last two years of undergraduate study and for any post-baccalaureate study.
3. A combined verbal and quantitative score of at least 1000 on the GRE.
4. A statement of purpose consistent with the goals of the program.
5. Three letters of recommendation.
6. For foreign applicants whose native language is not English, a TOEFL score of at least 550.
7. Approval by the program admissions committee.

Degree Requirements

The program consists of 36 hours, 30 of which involve multidisciplinary course work, including a pro-seminar; specialization in a discipline to be selected from the program's core departments (Economics, History, International Relations, Modern Languages, Political Science, and Sociology/Anthropology); and a breadth requirement comprising courses from at least two other departments, which may include offerings of programs outside the core departments. A master's thesis (six credits) is also required. As a non-credit requirement, students must demonstrate reading proficiency in either Spanish or Portuguese or, when advisable, another foreign language. The program stresses a close faculty-student advising relationship and the participation of visiting scholars from Latin America and the Caribbean, and other regions. The specific requirements of the program are as follows.

Course Work

Thirty credits of course work, to be selected from the approved list of graduate courses listed below. Courses must be passed with grades

of 3.0 or better and distributed as follows:

1. A pro-seminar (LAS 6003): focuses on the logic of inquiry on Latin America and the Caribbean, providing an introduction to comparative and historical perspectives on the region; comparisons with other world regions; and an overview of disciplinary approaches and research resources. To be offered each fall semester.
2. Disciplinary specialization: 15 credits (five courses) selected from the graduate offerings of the student's major department (Economics, History, International Relations, Modern Languages, Political Science, or Sociology/Anthropology). From three to nine of these credits must be fulfilled by taking the major department's graduate course(s) in research methodology to ensure that the student receives the training to carry out a successful thesis project.
3. Breadth requirement: 12 credits (four courses) selected from the graduate offerings of at least two other departments. Subject to the advisor's approval, up to six credits (two courses) may be selected from the graduate offerings of FIU programs besides those of the core departments.

Economics

ECO 5709	The World Economy
ECO 7115	Microeconomic Theory I
ECO 7206	Macroeconomic Theory I
ECO 7424	Econometric Methods I
ECS 5027	Economic Development of Emerging Nations
ECS 6436	Economics of Caribbean Migration
ECS 7015	Development Economics: Theory
ECS 7026	Development Economics: Planning and Policy
ECS 7405	Economics of Latin America
ECS 7435	Economics of the Caribbean
ECS 7445	Economics of Central America

History

HIS 6059	Historical Methods
LAH 5905	Readings in Latin American History
LAH 5935	Topics in Latin American History

- LAH 6906 Advanced Readings in Latin American History
- LAH 6915 Research in Latin American History

International Relations

- GEO 5415 Topics in Social Geography¹
- INR 5087 Ethnicity and the Politics of Development
- INR 5607 International Relations and Development
- INR 5935 Topics in International Relations¹
- INR 6056 Environment and Development
- INR 6209 Comparative Foreign Policy of Latin America
- INR 6605 Contemporary International System

Latin American Studies

- LAS 6003 Survey of Latin America

Modern Languages

- SPN 5525 Spanish American Culture
- SPN 5536 Afro-Cuban Culture
- SPW 5237 The Traditional Spanish American Novel
- SPW 5286 Contemporary Spanish American Novel
- SPW 5358 Graduate Seminar: Prose and Poetry of Jorge Luis Borges
- SPW 5359 Graduate Seminar: Poetry of Pablo Neruda
- SPW 5475 19th Century Latin American Literature
- SPW 5575 Spanish American Modernism
- SPW 5806 Methods of Literary Research
- SPW 5934 Special Topics in Language/Literature¹

Political Science

- CPO 5036 Politics of Development
- CPO 5091 Seminar in Comparative Politics
- CPO 5936 Topics in Comparative Politics¹
- CPO 6307 Seminar in South American Politics
- CPO 6376 Seminar in Central American Politics
- INR 6936 Seminar in Inter-American Politics
- POS 5706 Research Methodology
- POS 5158 Topics in Politics¹

Sociology/Anthropology

- ANT 5496 Social Research and Analysis
- ANT 5548 Ecological Anthropology
- ANT 6303 Comparative Feminisms
- ANT 6931 Seminar on Latin America
- SYA 6305 Research Methods I
- SYA 6306 Research Methods II
- SYD 6236 International Migration and Refugees
- SYD 6427 Seminar in Comparative Urban Issues
- SYD 6705 Comparative Analysis of Ethnicity and Race
- SYO 6305 Political Sociology
- SYP 5447 Sociology of International Development
- SYP 6306 Comparative Social Movements
- SYP 6907 Seminar in Comparative Social Change

¹Course may be counted toward requirements only with approval of graduate program director. Other courses not listed may also be counted with approval of graduate program director.

Foreign Language

Each student is required to demonstrate reading proficiency in either Spanish or Portuguese, or in another language such as French, Haitian Creole, or Dutch when justified by a student's research interests. Proficiency is demonstrated by scoring at least 'intermediate high' on the ACTFL/ETM exam for Spanish, Portuguese, or French. For other languages, corresponding tests of proficiency and levels of achievement will be required.

Thesis

The writing and defense of a thesis is required of all students. The thesis will be evaluated by a committee of three faculty members. The committee chair and at least one other member must be from core departments. The committee as a whole must be drawn from at least two departments. Thesis credits (six required) are in addition to the required 30 credits of course work.

For further information please contact Eduardo A. Gamarra, Graduate Program Director, Latin American and Caribbean Center, Florida International University, University Park, Miami, Florida 33199. Phone: (305) 348-2894; Fax: (305) 348-3593; E-mail: gamarrae@servms.fiu.edu

Linguistics

- Mehmet Yavas, Associate Professor, English and Director
- Kemp Williams, Associate Professor, English
- Lynn M. Berk, Professor, English
- Isabel Castellanos, Professor, Modern Languages
- Tometro Hopkins, Assistant Professor, English
- John B. Jensen, Professor, Modern Languages
- Peter A. Machonis, Associate Professor, Modern Languages
- Ana Roca, Associate Professor, Modern Languages

Master of Arts in Linguistics

Admission Requirements

Applicants must meet the University's graduate general admissions requirements; a GRE score of 1000 on the verbal and quantitative sections or an undergraduate GPA of 3.0 will be required. In addition, non-native speakers of English must submit a TOEFL score of 600.

Degree Requirements

The Master of Arts in Linguistics requires 36 graduate hours in Linguistics. Twenty-one of the 36 hours are in required courses, the remainder in electives. Beside maintaining an overall 3.0 average in all courses, students must also obtain a minimum of a 'B' in each of the required courses. (A 'B-' is not acceptable in these courses) and a minimum of a 'C' in each elective course (a 'C-' is not acceptable). Course work will be as follows:

Required Courses (All Students): (15)

LIN 5018	Introduction to Linguistics	3
LIN 5206	Phonetics	3
LIN 6323	Phonology	3
LIN 6510	Syntax I	3
LIN 6805	Semantics	3

A minimum of one course from each of the following groups:

Structure Course (3)

LIN 5501	English Syntax
LIN 5341	Morphology
SPN 5705	Structure of Spanish
FRE 5855	Structure of French
LIN 6572	Structure of a Non Indo-European Language

History Course (3)

LIN 5107	History of the English Language
LIN 5146	Historical and Comparative Linguistics
SPN 5845	History of the Language
FRE 5845	History of the Language

The remaining hours must be selected from other Linguistics (LIN) graduate offerings. Certain non-linguistics courses can be accepted with the approval of the Linguistics Committee.

Foreign Language Requirement

Students with no background in foreign languages will be required to take LIN 6572 "Structure of a Non-Indo-European Language", as a part of their 36-hour program.

Examination Requirement

Students will be required to take a written comprehensive exam in Linguistics. For most students, this will be a written exam. For any student who is writing a thesis and has a GPA of 3.7 or above, the thesis defense will constitute the comprehensive exam.

Thesis/Non-Thesis Options

Students may elect to follow a thesis or a non-thesis option. Those electing to write a thesis will take up to six credit hours in thesis research as part of their required 36 hours. When completed, the thesis will be defended orally before a committee made up of three faculty members, including the thesis director. Those electing to follow the non-thesis option will take all 36 hours in non-thesis courses.

Course Descriptions**Definition of Prefixes**

LIN - Linguistics.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

LIN 5017 Cognitive Linguistics (3). Explores the nature of human reason and categorization as revealed by language. Examines the role of metaphor, imagination, and bodily experience in human thought processes. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5018 Introduction to Linguistics (3). Introduction to Linguistic theory and analysis, with special emphasis on the major components of lan-

guages and modern approaches to their analysis. (F)

LIN 5019 Metaphor, Language, and Literature (3). Examines nature of metaphor as a cognitive phenomenon; how we use metaphor to conceptualize basic physical and cultural notions; role of cognitive metaphor in literature. Prerequisite: LIN 3013 or LIN 5018.

LIN 5107 History of the English Language (3). Study of the development of the grammar and vocabulary represented in samples of the English language from the 8th century to modern times. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5108 Language Universals (3). Universal properties of language from two major perspectives: those of Typologists and of Universal Grammarians. A variety of linguistic structures and theoretical explanations are examined. Prerequisite: LIN 3013, or LIN 3010, or LIN 5018, or the equivalent.

LIN 5146 Historical and Comparative Linguistics (3). The study of linguistic methodology for determining historical and genetic relationships among languages. Diachronic syntax and its methodology will be included. The relevance of historical and comparative linguistics to similar processes found in language acquisition and to socio-linguistics will be studied. Prerequisite: LIN 5206.

LIN 5206 Phonetics (3). The study of the articulatory mechanisms used in producing speech sounds and of their acoustic properties. Ear training in the phonetic transcription of speech sounds used in the world's languages. (F)

LIN 5207 Acoustic Phonetics (3). Introduction to principles of acoustic and instrumental phonetics, including the physics of speech sounds and use of the sound spectrograph and other instruments. Prerequisites: LIN 3010, LIN 3013, LIN 5018 or the equivalent, plus one additional course in phonetics or phonology. Corequisite: One of the prerequisites may be counted as a corequisite.

LIN 5211 Applied Phonetics (3). Study of sounds and suprasegmentals of English. Comparison of phonetic features of English with those of other languages. Universal constraints and markedness in learning second/foreign language pronun-

ciation. Prerequisites: LIN 3010, LIN 3013, or LIN 5018 or the equivalent.

LIN 5431 Morphology (3). The study of linguistic methodology for determining the morphological and syntactic structures of languages. Distinct theoretical approaches to analysis will be emphasized. Recent developments in linguistics that bear on language-universal and language-specific aspects of morphology. Prerequisite: LIN 6323.

LIN 5501 English Syntax (3). This course will focus on syntactic analysis of English. Although the course itself is non-theoretical, it uses a variety of underlying theoretical approaches to train students in syntactic analysis. (F,S)

LIN 5574 Languages of the World (3). Introduces the student to the richness of human linguistic diversity while demonstrating concurrently the underlying universality of human language. Prerequisite: LIN 3010, LIN 3013, or LIN 5018 or the equivalent.

LIN 5601 Sociolinguistics (3). Principles and theories of linguistic variation with special attention to correspondences between social and linguistic variables. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5603 Language Planning: Linguistic Minority Issues (3). Introduction to the field of language planning. Minority linguistic issues in developing and developed nations: official languages, endangered languages, and language as problem and/or resource. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5604 Spanish in the United States (3). An examination of the sociolinguistic research into Spanish in the U.S.: varieties of Spanish, language attitudes, language contact and change, and aspects of language use. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5613 Dialectology (3). The geography of language variation: linguistic geography, atlases, national and regional studies. Dialectology within a modern sociolinguistic framework; research approaches. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5625 Studies in Bilingualism (3). Readings and analysis of bilingual programs and binational goals. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5715 Language Acquisition (3). The study of the processes underlying normal first-language acquisition. The focus is on the development of the subsystems of language (i.e., the phonological, morphological, syntactic, and semantic subsystems) in the child's growing command of his or her native language.

LIN 5720 Second Language Acquisition (3). Research, theories, and issues in second language acquisition. Topics include the Monitor Model, the role of the first language, motivation, age, individual differences, code-switching, and the environment; affective variables and attitudes.

LIN 5732 Speech Errors and Linguistic Knowledge (3). This course focuses on the nature of linguistic errors produced by speakers in their native languages. Students will read research on errors produced by adult native speakers of a language, on first-language errors of children, and on errors made by persons acquiring a second language.

LIN 5733 Methods of Teaching Accent Reduction (3). Theory and methods regarding the teaching of pronunciation to non-native speakers of a language. Hands-on practice in helping non-native speakers improve their pronunciation. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5748 Survey of Applied Linguistics (3). Application of linguistics to problems in many fields, such as literature, translation, criminal justice, speech pathology, computer science, communications, public policy, and language instruction. Prerequisite: LIN 3010 or LIN 3013 or LIN 5018 or the equivalent.

LIN 5760 Research Methods in Language Variation (3). Research in sociolinguistics, dialectology, bilingualism: problem definition, instrument design, data collection and analysis, including sampling techniques and statistical procedures. Prerequisite: LIN 5601, LIN 5625, LIN 5613 or other course in variation.

LIN 5825 Pragmatics (3). Study of the relationships between language form, meaning, and use. Special emphasis on speech act theory. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5934 Special Topics in Linguistics (3). Content to be determined by instructor. May be repeated for credit when content changes. Prerequisite: LIN 3010, LIN 3013, or LIN 5018.

LIN 6323 Phonology (3). The study of phonological processes in languages and linguistic methodology for phonological analysis. Emphasis will be placed on recent theoretical questions concerning such issues as the abstractness of underlying forms, the naturalness of processes, and the relevance of markedness to a phonological description. Prerequisite: LIN 5206, Phonetics. (S)

LIN 6510 Syntax I (3). This course will expose students to the theoretical models on which much contemporary work in English grammar is based. Students will read works on selected topics such as structural linguistics, transformational grammar, and case grammar. Specific content may change from semester to semester. May be re-taken for credit when content changes. Prerequisites: LIN 3010, LIN 3013, LIN 5018 or the equivalent. (S)

LIN 6520 Syntax II (3). In-depth analysis of contemporary theories of syntax. May be repeated for credit with content changes. Prerequisite: LIN 6510. (F)

LIN 6571 Discourse Analysis (3). The study of the organization of language above the sentence level, such as conversational interactions and written texts. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 6572 Structure of a Non-Indo-European Language (3). An in-depth study of the structure of a non-Indo-European language. The particular language to be studied will be varied from semester to semester. Course may be repeated. Prerequisites: LIN 5018, LIN 5206, LIN 5222, and a course in syntax.

LIN 6602 Language Contact (3). A study of the language changes that occur when two or more languages come into contact with one another. The course will also examine the characteristics of the individuals and communities involved in such contact.

LIN 6706 Current Research Methods in Psycholinguistics (3). Review of current research in psycholinguistics, including adult production and comprehension, first and second language acquisition, and language

disorders. Students conduct original research in one of these areas. Prerequisite: LIN 3010, LIN 3013, or LIN 5018 or the equivalent.

LIN 6805 Semantics (3). The study of linguistic semantics. Language-universal and language-specific properties of the semantic structure of words in sentences will be considered. Recent debate and theoretical aspects, including those touching on the nature of word meaning, presuppositional-assertional grammar, and Speech-Act theory, will be read and discussed. Prerequisite: Introductory course in Linguistics or permission of instructor. (S)

LIN 6905 Independent Study (VAR). This course is designed for students who wish to pursue specialized topics in advanced Linguistics: phonetics, phonology, morphology, syntax, semantics, psycholinguistics, historical linguistics, or language contact. Prerequisite: Introductory course in Linguistics or permission of instructor.

LIN 6934 Special Topics in Linguistics (3). Content to be determined by students and instructor. (Approval of the Department required.)

LIN 6937 Seminar in Linguistics (3). Topics vary each semester. Prerequisite: A previous course in the same sub-area of Linguistics.

LIN 6971 Thesis (1-6). Prerequisite: Completion of all other requirements for the M.A. degree in Linguistics.

Mathematics

Enrique Villamor, *Associate Professor and Chairperson*

Kaushal Ajitabh, *Assistant Professor*

Gerardo Aladro, *Associate Professor*

Daniella Bekiranov, *Assistant Professor*

Julian Edward, *Assistant Professor*

Domitila Fox, *Instructor*

Shamita Dutta Gupta, *Assistant Professor*

Susan Gorman, *Instructor*

Steven M. Hudson, *Associate Professor*

George Kafkoulis, *Associate Professor*

Mark Leckband, *Associate Professor*

Diana McCoy, *Instructor*

Abdelhamid Meziani, *Associate Professor*

Richard Nadel, *Instructor*

Taje Ramsamuij, *Associate Professor*

David Ritter, *Associate Professor*

Michael Rosenthal, *Instructor*

Dev K. Roy, *Associate Professor*

Richard L. Rubin, *Associate Professor*

Mitch Rudominer, *Assistant Professor*

Philippe Rukimbira, *Associate Professor*

Anthony C. Shershin, *Associate Professor*

Minna Shore, *Instructor*

James F. Slifker, *Associate Professor*

Graham Taylor, *Assistant Professor*

John Zweibel, *Associate Professor*

Master of Science in Mathematical Sciences

Admission

The following are in addition to the University's graduate admission requirements:

1. Bachelor's degree in mathematics, applied mathematics or mathematical sciences from an accredited university or college.

2. A 'B' average or higher in upper division mathematics courses.

3. Graduate Record Examination taken within the past five years, with at least 650 on the quantitative portion and 500 on each of the other two parts.

4. Three letters of recommendation concerning the candidate's achievement and potential, from persons familiar with the candidate's previous academic performance.

5. Approval of the Graduate Committee.

Core Courses

The student must complete a minimum of 24 semester hours of graduate coursework. This coursework must include 5 courses from the following two lists, with at least 2 from each list.

List A:

MAA 5406	Complex Analysis	3
MAA 5616	Introduction to Real Analysis	3
MAP 5316	Ordinary Differential Equations	3
MAS 5311	Graduate Algebra	3
MAS 5312	Galois Theory	3
MHF 5107	Graduate Set Theory	3
MHF 5306	Graduate Mathematical Logic	3
MTG 5326	Introduction to Algebraic Topology	3

List B:

MAD 5405	Numerical Methods	3
MAP 5236	Mathematical Techniques of Operations Research	3
MAP 5326	Partial Differential Equations	3
MAP 5407	Methods of Applied Analysis	3
MAS 5145	Applied Linear Algebra	3

Electives

The remaining 9 hours of coursework will be used to fashion a coherent program of study best suited to the student's needs and interest. This requires the prior approval of the Graduate Committee and may be done in one or a combination of the following ways: a) Further work from lists A and B. b) A maximum of 2 courses of independent study, taken with Mathematical Sciences faculty. c) Graduate level coursework in Engineering, Physics or Statistics.

Master's Project

The student will complete his or her graduation requirements by writing an expository paper under the direction of a faculty member. The student may earn six credit hours (MAT 5970 Master's Research) in preparing the project. Successful completion of the Master's project requires a grade of 'B' or higher, as well as approval of a committee consisting of three mathematics faculty (including the director).

Remarks: The coursework must be completed with a 3.0 GPA average

or higher and a grade of 'C' or higher in each course. A maximum of two courses may be transferred into the program from outside the University, subject to the approval of the Graduate Committee. A total of 30 credit hours is required for graduation.

Course Descriptions

Definition of Prefixes

MAA-Mathematics, Analysis; MAD-Mathematics, Discrete; MAP-Mathematics, Applied.

COT 5420 Theory of Computation I (3). Abstract models of computation; halting problem; decidability and undecidability; recursive function theory. Prerequisite: MAD 3512.

COT 6400 Analysis of Algorithms (3). Complexity behavior of algorithms is described for Set Manipulation, Graph Theory, and Matrix Manipulation problems, among others. P and NP classes of problems reveal an inherent difficulty in designing efficient algorithms. Prerequisite: COP 3530.

MAA 5406 Complex Analysis (3). Harmonic functions, normal families, Riemann mapping theorem, univalent functions, infinite products and entire functions, elliptic functions, analytic continuation. Prerequisites: MAA 4211 and MAA 4402.

MAA 5616 Introduction to Real Analysis (3). Lebesgue Measure and Integral with applications to Integral Transforms. Prerequisite: MAS 3105, MAA 4211, MAP 4401 or MAA 4212.

MAD 5405 Numerical Methods (3). Advanced ideas and techniques of numerical analysis for digital computation. Topics include: linear and non-linear systems, ordinary differential equations, continuous system modeling techniques, and languages. Prerequisites: MAS 3105 and MAP 3302.

MAP 5236 Mathematical Techniques of Operations Research (3). This course surveys the mathematical methods used in operations research. Topics will be chosen from linear programming, dynamic programming, integer programming, network analysis, classical optimization techniques, and applications such as inventory theory. Prerequisite: MAP 5117 and MAS 3105 and either CGS 3420 or COP 2210.

MAP 5316 Ordinary Differential Equations (3). Existence and Uniqueness

theorem, matrix formulation, physical applications, regular singular points, autonomous systems, Laplace transform, special topics. Prerequisites: MAA 3200, MAA 4402 and MAS 3105.

MAP 5317 Advanced Differential Equations for Engineers (3). Topics may include Bessel Functions and other special functions arising from classical differential equations, Sturm-Liouville problems, partial differential equations, transform techniques. Credit may not be counted for both MAP 4401 and MAP 5317. Credit for MAP 5317 may not be applied toward the Master's degree in Mathematical Sciences. Prerequisites: MAC 3313 and MAP 3302.

MAP 5326 Partial Differential Equations (3). Basic concepts of first and second order PDE's, application to optics and wave fronts, Cauchy problem, Laplace equation, Green's function, Dirichlet problem, heat equation. Prerequisite: MAA 4211.

MAP 5407 Methods of Applied Analysis (3). Convergence, fixed point theorems, application to finding roots of equations, normed function spaces, linear operators, applications to numerical integration, differential and integral equations. Prerequisites: MAA 4211, MAP 3302, and MAS 3105.

MAS 5145 Applied Linear Algebra (3). Concepts of finite dimensional vector spaces. Theorems that have infinite dimensional analogues and those with important applications are emphasized. Prerequisites: MAS 3105 and MAA 3200.

MAS 5311 Graduate Algebra (3). A study of the basic material on groups, rings and vector spaces. Topics include the Jordan-Hölder theorem, structure of modules over Euclidean domains and canonical forms of matrices. Prerequisites: MAS 4301 or equivalent.

MAS 5312 Galois Theory (3). Extension fields, ruler and compass constructions, fundamental theorem of Galois Theory, cyclotomic and cyclic extensions, solutions of equations by radicals, selected topics. Prerequisites: MAS 5311 or permission of instructor.

MAT 5907 Independent Study (VAR). Individual conferences, assigned reading, and reports on independent investigations.

MAT 5921 Training in Mathematical Exposition (1). Students prepare and present supervised lectures on undergraduate mathematical topics to fellow students. Prerequisite: Graduate standing.

MAT 5970 Master's Research (1-6). Research toward preparation of master's project. Prerequisite: Permission of graduate committee.

MHF 5106 Graduate Set Theory (3). Zermelo-Frankel axioms, ordinals and cardinals, Gödel's constructible universe, large cardinals, forcing and the independence of the Continuum Hypothesis and the Axiom of Choice. Prerequisites: MHF 4102 or MAA 4211 or permission of instructor.

MHF 5306 Graduate Mathematical Logic (3). First order languages, construction of models from constants, advanced construction of models, nonstandard models, recursion theory, RE sets, Turing degrees, oracle construction. Prerequisites: MHF 4302 or permission of instructor.

MTG 5326 Introduction to Algebraic Topology (3). Classification of surfaces, fundamental group, homotopy type, Van Kampen theorem, simplicial complexes, introduction to homology theory. Prerequisites: MAS 4301 and MTG 4302.

STA 5446-STA 5447 Probability Theory I and II (3-3). This course is designed to acquaint the student with the basic fundamentals of probability theory. It reviews the basic foundations of probability theory, covering such topics as discrete probability spaces, random walk, Markov Chains (transition matrix and ergodic properties), strong laws of probability, convergence theorems, and law of iterated logarithm. Prerequisite: MAC 3313.

STA 6807 Queuing and Statistical Models (3). Review of probability concepts, basic probability distributions, Poisson process, queuing models, statistical models. Prerequisites: Permission of Instructor, MAC 3312 and either STA 3033 or STA 3321.

Modern Languages

Isabel Castellanos, Professor and Chairperson

Aurelio Baldor, Instructor

Pascale Becel, Assistant Professor

Jean-Robert Cadely, Assistant Professor

Eric Camayd-Freixas, Assistant Professor

Ricardo Castells, Assistant Professor

James O. Crosby, Professor Emeritus

Leonel A. de la Cuesta, Associate Professor

Asuncion Gomez, Assistant Professor

Yvonne Guers-Villate, Professor Emeritus

Danielle Johnson-Cousin, Associate Professor

Santiago Juan-Navarro, Assistant Professor

John B. Jensen, Professor

Peter A. Machonis, Associate Professor

Ramon Mendoza, Professor (North Campus)

Marian Montero-Demos, Associate Professor

Ana Roca, Associate Professor

Reinaldo Sanchez, Professor

Juan Torres-Pou, Assistant Professor

Maida Watson, Professor

Marcelle Welch, Professor

Theodore Young, Assistant Professor

Florence Yudin, Professor

Master of Arts in Spanish

Admission Requirements: To be admitted into the Master's degree program, a student must:

1. Hold a Bachelor's degree in Spanish from an accredited university or college. Special cases, such as holders of a degree in a related field, will be evaluated individually by the Department.

2. Take the Graduate Record Examination (GRE) quantitative and verbal sections.

3. Have attained a minimum 3.0 grade-point average (B average), during the last two years of her/his undergraduate program as determined by the FIU Admissions Office, or attain a score of at least 1,000 on the GRE.

4. Demonstrate the ability to speak Spanish with near-native fluency and to write in Spanish. Demonstrate the ability to read English with excellent proficiency. An examination may be necessary. Contact the Director of Graduate Study (305-

348-2851; Modern Languages, FIU, Miami, FL, 33199). Students with deficiencies will be required to complete certain course work before beginning graduate study.

5. Submit two letters of recommendation, preferably from persons in the academic community who are in a position to comment on the applicant's suitability for graduate work;

6. Receive approval of the departmental graduate committee.

Degree Requirements

The Master's degree program consists of 33 semester hours of graduate level work. A maximum of six credits of graduate course work may be transferred into the program from other institutions, subject to the approval of the departmental graduate committee. Six core courses and three elective courses are required at the 5000-and 6000-level. Some courses have prerequisites which do not count toward the degree. All core courses in literature must be taken with or after SPW 5806. Courses taken before SPW 5806 are considered to be electives.

Core Courses

SPW 5806	Methods of Literary Research (<i>must be taken in the first year of study</i>)	3
SPN 5705	The Structure of Spanish	3
One course in peninsular Spanish Literature of the 19 th or 20 th centuries.		3
One course in either Medieval Spanish Literature or Literature of the Golden Age.		3
Two courses in Spanish American Literature.		3

Electives

A student must take at least nine graduate credits of electives, as follows: three in Spanish or Latin American literature, and six from one or more of the following areas: Spanish or Latin American literature, Linguistics, Translation/Interpretation, or Culture of Spain, Latin America or Hispanics in the United States.

Graduation Requirements

To receive the M.A. degree in Spanish, a student must complete all the course work with a 3.0 GPA or higher, and receive a minimum grade of 'B' in every course. Upon completion of 27 graduate credits (core and elective courses), students will have the option of writing

a thesis (equivalent to six credits), or taking two elective courses and writing a research paper. The thesis will be presented to an ad hoc committee chosen by the student and his or her advisor. The research paper must be submitted to a committee of two professors of the Department. Upon completion of 33 credits, the student will be required to take a Comprehensive Written Examination, based on course work and on the Department's Graduate Reading List (the exam must be passed with a minimum grade of 'B'; it may be taken no more than twice).

Doctor of Philosophy in Spanish

The doctoral program in Spanish offers students the opportunity to specialize in one of two major fields: Peninsular Spanish Literature or Spanish American Literature. Minors are available in Peninsular Spanish Literature, Spanish American Literature, and Hispanic Linguistics.

Admission Requirements:

To be admitted to the doctoral program, a student must:

1. Hold a Bachelor's degree in Spanish from an accredited college or university. Special cases, such as holders of a degree in a related field, will be evaluated individually by the Department.

2. Take the Graduate Record Examination.

3. Demonstrate the ability to speak, understand, read, and write in Spanish with near-native fluency. Demonstrate the ability to speak and read in English with excellent proficiency. For students whose native language is not English, the TOEFL is required, and they must obtain a score of 550 or higher.

4. Have attained a minimum grade point average of 3.0 (B average) during the last two years of her/his undergraduate studies or attain a combined (verbal and quantitative) score of at least 1000 in the GRE. Applicants with Master's degrees are required to have a graduate GPA of 3.25. A GPA of 3.5 in graduate Spanish courses is expected in such cases.

5. Apply for graduate admission to the Admissions Office and submit to the Department of Modern Languages the following documentation: a) two letters of recommendation from former pro-

fessors in the format required by the Graduate Studies Committee, b) a resume, c) a statement of purpose in English or Spanish, addressing the candidate's goals and objectives in pursuing a doctorate in Spanish, and d) a writing sample in Spanish, preferably a term paper or thesis.

6. Receive approval of the departmental Graduate Studies Committee. Admission is competitive, and meeting all minimum requirements does not guarantee automatic entrance to the program.

Degree Requirements

The doctoral program consists of 90 semester hours of graduate level work beyond the Bachelor's degree, distributed as follows: 66 graduate credits of courses and 24 credits of dissertation. Students holding Master of Arts degrees in Spanish or Hispanic Studies will be considered for admission and some or all of their graduate credits may be counted toward the doctoral degree after being evaluated and approved by the Graduate Studies Committee. Students will be able to transfer a maximum of 36 graduate credits from other universities.

Core Courses (12 credits)

All core courses must be taken as graduate courses offered by the university and may not be taken as independent studies:

1. SPW 5806 Methods of Literary Research
2. SPN 5705 The Structure of Spanish
3. SPW 6718 Historiography of Literature
4. SPW 6825 Literary Theory and Criticism

Distribution Requirement (15 credits)

All students must take:

- One course in Medieval or Golden Age Peninsular Spanish Literature
- One course in Peninsular Spanish Literature of the 18th, 19th or 20th century
- One course in Colonial/19th century Spanish American Literature
- One course in 20th century Spanish American Literature
- One additional course in Spanish American Literature

Major Field (18 credits)

All students must take at least 18 credits of electives in their elected field of specialization.

Minor Field (12 credits)

Twelve credits of electives in the student's chosen field (Peninsular Spanish Literature, Spanish American Literature, or Hispanic Linguistics).

Electives (9 credits)

Students may choose from graduate courses in literature, linguistics, culture, and translation/interpretation.

Dissertation (24 credits)**Graduation Requirements**

To receive a Ph.D. in Spanish, a student must complete all courses with a GPA of 3.0 or higher, and receive a minimum grade of 'B' in every course. Before graduation the student must demonstrate a reading knowledge of a language other than English or Spanish, chosen by the student in consultation with her/his adviser. Upon completion of 33 graduate credits beyond the Bachelor's degree, students must take qualifying written and oral examinations which will determine whether they are permitted to continue their studies toward the doctorate or whether they should be terminated, with or without a master's degree. In the case of students registered for the master's degree, the M.A. comprehensives will also serve as a qualifying examination for the Ph.D. Following completion of most of the coursework, students are required to take written and oral doctoral comprehensive examinations. They must be passed with a minimum grade of 'B' and may not be taken more than twice. A student is formally considered a doctoral candidate upon successful completion of the comprehensive examinations and the acceptance of a dissertation proposal. Students must write and successfully defend a doctoral dissertation before a committee of three faculty members, two of whom must be from the graduate program faculty.

Course Descriptions**Definition of Prefixes**

FOL-Foreign Languages; FOT-Foreign Languages in Translation; FOW-Foreign Languages, Comparative Literature; FRE-French Language; FRT-French Translation; FRW-French Literature (Writings); GER-German Language; LIN-Linguistics; POR-Portuguese Language; SPN-Spanish Language; SPT-Spanish Translation; SPW-Spanish Literature (Writings).

(See English listing for additional Linguistics courses.) Application of basic language skills.

FIL 5526 Spanish Film (3). The history of film in Spain and Discussions of films by the most important 20th Century Directors.

FIL 5527 Latin American Film (3). The study of 20th Century films and documentaries produced by leading Latin American directors. Films are examined in relation to Latin American Society and its literary creations.

FOL 5735 Romance Linguistics (3). The common and distinctive Romance features. Survey of linguistic geography and internal/external influences.

FOL 5906 Independent Study (1-3). Project, field experience, readings, or research.

FOT 5125 Literature In Translation (3). Masterpieces of world literature. Open to students who are proficient in more than one language.

FOT 5805 Translation/Interpretation Arts (3). The language barrier and translation and interpretation. Types, modes, and quality of T/I: philological, linguistic, and socio-linguistic theories. History of T/I from Rome to date. The impact of T/I on Inter-American developments. Prerequisite: Graduate standing or permission of instructor.

FOW 5395 Genre Studies (3). Examination of a single literary form (e.g. short story, poetry), or the study of interaction between literary types (e.g. novel and drama).

FOW 5545 Bicultural Writings (3). Experiment in linguistic pluralism. Content and focus to be determined by the international community.

FOW 5587 Comparative Studies (3). Cross-over and distinctiveness in a multi-language problem, period, or aesthetic.

FOW 5934 Special Topics In Language/Literature (3). Content and objectives to be determined by students and teacher.

FOW 5938 Graduate Seminar (3). Topic and approach to be determined by students and instructor. (Approval of the Department required.)

FRE 5060 Language for Reading Knowledge I (3). Designed primarily for graduate students who wish to

attain proficiency for M.A. and Ph.D. requirements. Open to any student who has no prior knowledge of the language.

FRE 5061 Language for Reading Knowledge II (3). Emphasis on translation of materials from the student's field of specialization. Prerequisite: FRE 5060 or equivalent.

FRE 5505 La Francophonie (3). Analysis of the different varieties of French spoken outside of France. Includes Quebec French, African French, and French Creoles. Also examines the political alliance of Francophone countries. Credit will not be given for both FRE 4503 and FRE 5505. Prerequisites: FRE 3780 or LIN 3010 or LIN 3013.

FRE 5735 Special Topics in Linguistics (3). Content to be determined by students and instructor. (Approval of Department required.)

FRE 5755 Old French Language (3). Introduction to the phonology, morphology, and syntax of the Old French language. Reading and analysis of the 12th and 13th century texts in their original. Comparison of major medieval dialects. Prerequisite: FRE 4840 or FRE 5845.

FRE 5845 History of the Language I (3). The internal and external history of the French language from Latin to Old French. Examination of some of the first texts written in French. Credit will not be given for both FRE 4840 and FRE 5845. Prerequisite: FRE 3780.

FRE 5846 History of the Language II (3). External and internal history of the French language from 1400 to the present. Examination of first dictionaries and grammars of French. Survey of recent linguistic legislation concerning the French language. Credit will not be given for both FRE 4841 and FRE 5846.

FRE 5855 Structure of Modern French (3). Systematic study of the phonology, morphology, syntax, and lexicon of Modern French. Taught in English. Credit will not be given for both FRE 4855 and FRE 5856.

FRE 5908 Independent Study (1-3). Project, field experience, readings, or research.

FRT 5805 Translation/Interpretation Arts (3). Techniques of professional translation and interpretation. Prerequisite: FRT 4801.

FRW 5395 Genre Studies (3). Examination of a single literary form (e.g. short story, poetry), or the study of interaction between literary types (e.g. novel and drama).

FRW 5934 Special Topics in Language Literature (3). Content and objectives to be determined by student and instructor.

FRW 5938 Graduate Seminar (3). Topic and approach to be determined by students and instructor. (Approval of the Department required.)

GER 5060 German for Reading Knowledge (3). Designed primarily for graduate students who wish to attain proficiency for M.A. or Ph.D. requirements. Open to any student who has no prior knowledge of the language.

GER 5061 German for Reading Knowledge (3). Emphasis on translation of materials from the student's field of specialization. Prerequisite: GER 5060 or the equivalent.

LIN 5207C Acoustic Phonetics (3). Introduction to principles of acoustic and instrumental phonetics, including the physics of speech sounds and use of the sound spectrograph and other instruments. Prerequisites: LIN 3010, LIN 3013, LIN 5018 or the equivalent, plus one additional course in phonetics or phonology. Corequisite: One of the prerequisites may be counted as a corequisite.

LIN 5601 Sociolinguistics (3). Principles and theories of linguistic variation with special attention to correspondences between social and linguistic variables. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5603 Language Planning: Linguistic Minority Issues (3). Introduction to the field of language planning. Minority linguistic issues in developing and developed nations: official languages, endangered languages, and language as problem and/or resource. Prerequisites: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5604 Spanish in the United States (3). An examination of the sociolinguistic research into Spanish in the U.S.: varieties of Spanish, language attitudes, language contact and change, and aspects of language use. Prerequisites: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5613 Dialectology (3). The geography of language variation: linguistic

geography, atlases, national and regional studies. Dialectology within a modern sociolinguistic framework; research approaches. Prerequisites: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5625 Studies in Bilingualism (3). Readings and analysis of bilingual programs and binational goals. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 5720 Second Language Acquisition (3). Research, theories, and issues in second language acquisition. Topics include the Monitor Model, the role of the first language, motivation, age, individual differences, code-switching, and the environment; affective variables and attitudes.

LIN 5760 Research Methods in Language Variation (3). Research in sociolinguistics, dialectology, bilingualism: problem definition, instrument design, data collection and analysis, including sampling techniques and statistical procedures. Prerequisite: LIN 5601, LIN 5625, LIN 5613 or other course in variation.

LIN 5825 Pragmatics (3). Study of the relationships between language form, meaning, and use. Special emphasis on speech act theory. Prerequisites: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 6571 Discourse Analysis (3). The study of the organization of language above the sentence level, such as conversational interactions and written texts. Prerequisite: LIN 3010, LIN 3013, LIN 5018 or the equivalent.

LIN 6934 Special Topics in Linguistics (3). Content to be determined by students and instructor. (Approval of the Department required.)

(See English listing for additional Linguistics courses.)

SPN 5060 Language for Reading Knowledge (3). Designed primarily for graduate students who wish to attain proficiency for M.A. or Ph.D. requirements. Open to any student who has no prior knowledge of the language.

SPN 5061 Language for Reading Knowledge (3). Emphasis on translation of materials from the student's field of specialization. Prerequisite: SPN 5060 or the equivalent.

SPN 5525 Spanish American Culture (3). A graduate survey of the major artistic phenomena in Latin America. Art, music, film, and literature will be discussed in their cultural context. Prerequisite: Graduate standing and permission of the instructor.

SPN 5536 Afro-Cuban Culture (3). Explores the role played by blacks in Cuban culture. Issues studied include: Afro-Cuban religions, languages, and music, as well as the Afro-Cuban presence in literature and the arts.

SPN 5537 Special Topics in Afro-Hispanic Culture (3). Close examination of various topics related to the culture of African diaspora groups in the Hispanic world.

SPN 5705 The Structure of Spanish (3). An introduction to Spanish linguistics. Topics include Spanish phonetics, phonology, morphology, and syntax. Students who have previously taken Syntactic Structures of Spanish and/or Sound Structure of Spanish will not receive credit for this course. Prerequisites: LIN 3010, LIN 3013, or LIN 5018 or the equivalent.

SPN 5725 Syntactic Structures of Spanish and English (3). An in-depth study of syntactic structures in Spanish and English, with an emphasis on how linguistic theory can account for the similarities and differences between the two languages. Prerequisites: LIN 3010, LIN 3013, or LIN 5018 or the equivalent.

SPN 5805 Morphological Structures of Spanish and English (3). A survey of the morphologies of Spanish and English. Topics include the difference between isolating and synthetic languages, rich vs. impoverished agreement, and syntactic ramifications of morphology. Prerequisites: LIN 3010, LIN 3013, or LIN 5018 or the equivalent.

SPN 5807 Syntactic Structures of Spanish (3). The study of syntactic structures in Spanish, topics include different syntactic approaches to current issues in Spanish syntax. Prerequisites: LIN 3010, LIN 3013, or LIN 5018 or the equivalent.

SPN 5824 Dialectology of the Spanish Caribbean (3). Study of varieties of Spanish used in the Caribbean area, including Miami-Cuban Spanish. The course will take historical and contemporary perspectives and will involve research among informants in South Florida. Prerequisite:

quisites: LIN 3010, LIN 3013, or LIN 5018 or the equivalent.

SPN 5845 History of the Language (3). Historical development of the Spanish language, primarily from the point of view of internal linguistic change. Spanish as an example of general processes of language development. Prerequisites: LIN 3010, LIN 3013, or LIN 5018.

SPN 5908 Independent Study (1-3). Project, field experience, readings, or research.

SPN 6505 Spanish Culture (3). Selected development in language, literature, art, music, film, and the social institutions of Spain. Prerequisites: Graduate standing and permission of instructor.

SPN 6535 Hispanic Culture in the U.S. (3). Readings in literature, culture, and language to illustrate the experience of the major Hispanic groups in the United States. Prerequisites: Graduate standing and permission of the instructor.

SPN 6795 Phonological Structure of Spanish (3). Approaches to current issues in Spanish phonology. Linguistic methodology for the analysis of phonological processes in Spanish. Prerequisite: Graduate standing.

SPN 6825 Hispanic Dialectology (3). A study of the principal varieties of the Spanish language in the Spanish-speaking world, with special emphasis on Latin American Spanish. Prerequisite: Graduate standing.

SPN 6930 Special Topics In Linguistics (3). Content to be determined by students and instructor. (Approval of the Department required.)

SPN 6970 Thesis Research (1-10). Research toward completion of Master's Thesis. Repeatable. Prerequisite: Permission of Department.

SPN 7972 Dissertation Research (1-10). Research toward the completion of a doctoral dissertation. Repeatable. Prerequisite: Admission to Doctoral Candidacy.

SPT 5118 Literature in Translation (3). Masterpieces of world literature. Open to students who are proficient in more than one language.

SPT 5715 Hispanic Women Writers in Translation (3). Readings and analysis of Spanish and Spanish American women writers in translation. Emphasis on cultural and linguistic consid-

erations involved in the translation of literary texts. Prerequisite: Graduate standing or permission of instructor.

SPW 5155 Comparative Studies (3). Cross-over and distinctiveness in a multi-language problem, period, or aesthetic.

SPW 5237 The Traditional Spanish American Novel (3). Study and analysis of the traditional Spanish novel as a form of art, from 19th century Lizardi's *El periquillo sarniento*, to 1950. The novels and authors studied are representative of 'costumbrismo', 'romanticismo', 'naturalismo', 'modernismo', and 'criollismo'.

SPW 5277 Twentieth Century Spanish Novel, from 1956 to the Present (3). Analysis of the Spanish novel from Ferlosio's *El Jarama* to the present. The perspective will be focused within historical, social, and artistic context. Representative authors such as Cela, Martin Santos, Umbral, Delibes, Benet, Goytisolo, and others will be included.

SPW 5286 Contemporary Spanish American Novel (3). A study of the Spanish American Novel from 1950. The course will intensively and extensively focus on the novelists who are best known for their innovations, defining and analyzing the qualities which give originality and newness both in themes and language.

SPW 5346 Poetry of Jorge Guillen (3). Selected readings from the five volumes of *Aire nuestro*. Emphasis on the techniques of close reading and explication. Related selections from Guillen's literary criticism.

SPW 5358 Graduate Seminar: Prose and Poetry of Jorge Luis Borges' (3). Close readings of short stories and poetry. Emphasis on Borge's linguistic and cultural pluralism and the interplay of philosophy with fabulation.

SPW 5359 Graduate Seminar: Poetry of Pablo Neruda (3). Chronological examination of the major works of Chile's Nobel Laureate. Related readings from Neruda's *Memories*. Emphasis on the poet's linguistic and aesthetic innovations.

SPW 5387 Women and Poetry (3). Women as poets and the poetized. Close reading of Peninsular and Latin American texts, 16th - 20th Century. Students examine the contributions of women and how they have been represented in poetry.

Prerequisite: 4000 or 5000 level course in Hispanic Poetry.

SPW 5405 Medieval Spanish Literature (3). Readings in Medieval literature of Spain including the epic, the learned poetry of the XIIIth and XIVth Centuries, and the literature of Juan II's court. Prerequisites: Graduate standing and permission of instructor.

SPW 5407 The Renaissance in Spain (3). Readings in the literature and cultural expressions of the Spanish Renaissance. Prerequisites: Graduate standing and permission of instructor.

SPW 5425 Quevedo: Poetry (3). Close reading of selected poems by Spain's greatest baroque poet and creator of modern Spanish satire, including poems on love, death, and metaphysical concerns, and a wide range of humorous poems.

SPW 5426 Quevedo: Prose Satire (3). Close reading of selected satires in prose by Spain's greatest baroque satirist and creator of modern Spanish satire. Includes Quevedo's picaresque novel *El Buscon*, and his *Suenos*, or *Visions of Hell*.

SPW 5428 Theatre in Calderon and Lope (3). The creation of verbal theatrical technique in the Baroque masters Calderon de la Barca and Lope de Vega.

SPW 5436 Poetry Writing in Spanish (3). Readings from Spanish and Latin American texts; description and recreation of traditional and experimental metrics. Students will exchange critiques of original poems. Prerequisites: sample of unpublished poems; wordprocessing literacy; permission of instructor.

SPW 5475 19th Century Latin American Literature (3). A study of the main literary works of Spanish speaking 19th Century Latin America: romanticism, Realism, Naturalism and Modernism. Prerequisites: Upper level and graduate standing.

SPW 5515 Advanced Studies in Hispanic Folklore (3). Studies the oral literary and linguistic tradition of the Hispanic world. Prerequisites: Graduate standing and permission of instructor.

SPW 5556 Spanish Realism and Naturalism (3). Readings in Spanish XIXth Century Novel of Realism and Naturalism including Alarcon, Perez Galdos, Pardo Bazan, Clarin and Blasco Ibanez. Prerequisites: Graduate standing and permission of instructor.

SPW 5575 Spanish American Modernism (3). An in-depth study of prose and poetry of one of the most important periods of Spanish American literature, focusing on Martí, Darío, Nájera, Casals, Silva, Valencia, Lugones, and Herrera y Reissig.

SPW 5606 Cervantes (3). A comprehensive introduction to the masterpieces of Cervantes as the creator of the modern novel, and to critical theories about his art.

SPW 5735 Hispanic Literature of the United States (3). Readings in the literature of Hispanics in the United States. Prerequisites: Graduate standing and permission of instructor.

SPW 5756 Mexico in Poetry (3). Close reading of modern poets; discussion of essays on Theory and Practice. Students examine national representation in Myth, symbol and metaphor. Prerequisites: 4,000 or 5,000 level course in Culture of Literature.

SPW 5486 Modern Spanish Women Writers (3). Analysis of narrative works by Spain's most representative women writers from the 19th century to the present. Emphasis on the novel. Includes works by Pardo Bazan, Matute, Laforet, Martín Gaité. Prerequisites: Graduate standing or permission of instructor.

SPW 5806 Methods of Literary Research (3). Introduction to bibliography, methods of research, the composition of essays, rhetoric, and the presentation of documentation. Theory of literary criticism, and its practical application to texts in Spanish.

SPW 5934 Special Topics in Language/Literature (3). Content and objectives to be determined by student and instructor.

SPW 6 Spanish American Historical Novel (3). The evolution of the historical novel in Spanish America from the Romantic period to the present. Stylistic, literary, and theoretical analyses of selected traditional and recent historical novels. Prerequisite: Graduate standing.

SPW 6216 Golden Age Prose (3). Analysis of representative prose works from 16th and 17th century Spain. Emphasis will be on the picaresque novel, the pastoral novel, autobiography, and the short story. Prerequisite: Graduate standing.

SPW 6335 Golden Age Poetry (3). An examination of major poetries (1450-

1650); emphasis on historical/cultural contexts. Prerequisite: Graduate standing.

SPW 6345 Twentieth Century Spanish Poetry (3). Close reading of two of the greatest poets of the 20th century (Jorge Guillén; F. García Lorca) and of major voices from the Generation of 1927 and from post-Franco Spain. Emphasis on cultural contexts. Prerequisite: Graduate standing.

SPW 6367 Prose and Poetry of Jose Martí (3). Study of Jose Martí's prose and poetry within the aesthetic and ideological contexts which characterize the discourse of Spanish American Modernism. Prerequisite: Graduate standing.

SPW 6389 Cuban Novel and Short Story (3). Critical reading of representative texts of the Cuban novel and short story from XIX century to contemporary narrative expressions, within historical, social and artistic context. Prerequisite: Graduate standing.

SPW 6395 Genre Studies (3). Examination of a single literary form (e.g. short story, poetry,) or the study of interaction between literary types (e.g. novel and drama).

SPW 6495 The Latin American Experience Literature and Film (3). Literary and cinematic representations of significant periods in the formation of Latin American politics, culture, and identity. Prerequisite: Graduate standing.

SPW 6545 Spanish Neoclassicism and Romanticism (3). Readings in 18th and 19th century Spanish neoclassicism and romanticism, including Meléndez Valdés, Moratín, Espronceda, Zorrilla, Larra, and others.

SPW 6775 Literature of the Spanish Caribbean (3). Close readings of representative texts of the literature of the Dominican Republic, Cuba and Puerto Rico. Emphasis on the characteristics of the literary discourse within the context of a regional literature. Prerequisite: Graduate standing.

SPW 6825 Literary Theory and Criticism (3). Study of the theoretical foundation of literature and contemporary systems of critical approach to literary discourse. Prerequisite: Graduate standing.

SPW 6718 The Historiography of Literature (3). Methodology and theory in the writing of literary history: periodization, continuity and change, literature in intellectual history. Prerequisite: Graduate standing.

SPW 6936 Graduate Seminar (3). Topic and approach to be determined by students and instructor. Prerequisite: Approval of the Department.

School of Music

Fredrick Kaufman, Professor and
Director (composition)

John Augenblick, Associate
Professor (choral)

Gary Campbell, Assistant Professor
(saxophone)

Robert Davidovici, (violin)

J. Richard Dunscomb, Professor (jazz)

Orlando J. Garcia, Associate
Professor (composition)

Anna Elizabeth Hinkle-Turner,
Visiting Assistant Professor
(composition/electronic music)

Clair McElfresh, Professor (choral)

Matthew McInturf, Assistant Professor
(bands)

Michael Orta, Visiting
Instructor/Lecturer (jazz piano)

Carlos Pianini, Professor (orchestra)

Joseph Rohm, Associate Professor
(theory)

Miguel Salvador, Associate Professor
(piano)

Arturo Sandoval, Professor/
Artist-in-Residence (trumpet)

Susan Starr, Professor/
Artist-in-Residence (piano)

Violet Vagramian-Nishanian,
Professor (theory)

Miami String Quartet

Ivan Chan, (violin)

Chauncey Patterson, (viola)

Cathy Meng Robinson, (violin)

Keith Robinson, (cello)

Adjunct Instructors:

Elsie Augenblick, choral

Jay Bertolei, tuba

Lindsey Blair, jazz guitar

Marla Dunscomb, jazz

Michèle Fernandez, woodwind
techniques

Deborah Fleisher, harp

Luis Gomez-Imbert, string bass

Robert Grabowski, jazz

Paul Green, clarinet

James Hacker, trumpet

Geoffrey Hale, bassoon

Jon Hutchison, trombone

Cliff Huxford, French horn

Jonathan Joseph, jazz drums

Lisa LaCross, flute

Sam Lussier, jazz

Dennis Marks, jazz bass

Maritza Mascarenhas, world music

Carlos Molina, classical guitar

Carolyn Morgan, piano

Louis Mowad, classical guitar

Hector Nolasco, Latin percussion

Nicky Orta, jazz bass

Nobleza Pilar, voice

Errol Racklpo, jazz vibes

Loretta Scherperel, organ

Leslie Schroerlucke, clarinet

Lee Stone, string techniques

Nestor Torres, jazz flute

John Talaya, percussion

Armando Tranquilino, theory

Gretel VanWalterop, oboe

Master of Music

The FIU School of Music offers an M.M. degree with specialization in the following areas: music theory/composition, jazz studies, applied (winds/percussion, strings, voice, piano, piano accompanying), and conducting (choral, orchestral, wind). For more information please contact the FIU School of Music.

The proposed program will be a Master's of Music with four areas of concentration. All students will be required to take music theory, music history, and performance/ensemble courses, thus giving a common basis for all 4 areas of concentration. Within each area of concentration students will further focus on an area of strength. The program will give students the tools to continue their growth as musicians for either continued advanced studies at the doctoral level or for careers as professional musicians.

The proposed program will take advantage of the established expertise of the FIU music faculty in the four areas of concentration and will be based upon 36 credit hours. A final research/performance project will be required.

Required Areas

Music Theory (Analytical Techniques course required in all areas) ¹	3
Music History/Literature ¹	3
Ensembles/applied/conducting	2

The above eight credits are included in the 36 credits required for each area of concentration.

¹A placement exam is required before students are allowed into these courses. Remedial work may be required before these courses may be taken. A required History course is selected in consultation with area advisor. All students must take Analytical Techniques as the required theory course.

Areas of Concentration

I. Theory/Composition (36 credit hours)

Composition (3 semesters - 2 credits each)	6
Composers Forum/Workshop (4 semesters - 0 credits each)	0
Electronic Music (2 semesters pending placement)	6
Analytical Techniques	3
Theory Elective: Comprehensive Theory, Seminar (20 th c st. quartets, the NY school), Set Theory, Schenkerian Analysis	6
Theory Elective II: Strict Composition or Modal Counterpoint or Advanced Orch	3
Graduate Music Electives	3
Music History/Literature Elective	3
Thesis/Recital (includes private lessons and 45 minute recital of student's compositions during last semester)	6

II. Performance - Piano, Accompanying, Winds, Percussion, Strings, Voice

Applied Piano (36 credit hours)

Applied Piano (3 semesters - 2 credits each)	6
Accompanying (2 semesters - 1 credit each)	2
Chamber Music (2 semesters - 1 credit each)	2
Thesis/Recital (includes private lessons and recital during last semester)	6
Analytical Techniques	3
Keyboard Literature	3
Large Ensemble (2 semesters - 1 credit each)	2
Graduate Music Electives	12

Piano Accompanying (36 credit hours)

Applied Piano (3 semesters - 2 credits each)	6
Instrumental Accompanying	2
Vocal Accompanying	2
Chamber Music (2 semesters - 1 credit each)	
Thesis/Recital (includes private lessons and recital during last semester)	6
Analytical Techniques	3
Keyboard Literature	3
Italian Diction	1
German Diction	1
French Diction	1
Large Ensemble (2 semesters - 1 credit each)	2
Graduate Music Electives	7

**Applied Woodwinds, Brass,
Percussion (36 credit hours)**

Applied Instruction (3 semesters - 2 credits each)	6
Chamber Music (2 semesters - 1 credit each)	2
Thesis/Recital (includes private lessons and recital during last semester)	6
Symphonic Literature or Wind Literature	3
Analytical Techniques	3
Elective Ensembles (orchestra/wind ensemble) (6 ensembles - 1 credit each)	6
Graduate Music Electives	10

Applied Strings (36 credit hours)

Applied Strings (3 semesters - 2 credits each)	6
Chamber Music Elective (4 semesters - 1 credit each)	4
Thesis/Recital (includes private lessons and recital during last semester)	6
Symphonic Literature	3
Analytical Techniques	3
Orchestra (4 semesters - 1 credit each)	3
Music History/Literature Elective	3
Graduate Music Electives	7

Applied Voice (36 credit hours)

Applied Voice (3 semesters - 2 credits each)	6
Elective Ensembles (4 semesters - 1 credit each)	4
Vocal Pedagogy	3
Opera Literature	3
Song Literature	3
Analytical Techniques	3
Graduate Music Electives	8
Thesis/Recital (includes private lessons and recital during last semester)	6

III. Conducting**Choral (conducting) (36 credit hours)**

Analytical Techniques	3
Choral Literature	3
Graduate Choral Conducting (3 semesters - 2 credits each)	6
Conducting Seminar/Score Reading (4 semesters - 1 credit each)	4
Thesis/Recital (includes private conducting and recital during last semester)	6
Music History/Literature Electives	6
Elective Ensembles (Choirs, 4 semesters - 1 credit each)	4
Graduate Music Electives	4

Wind (conducting) (36 credit hours)

Analytical Techniques	3
Wind Literature	3
Graduate Wind Conducting (3 semesters - 2 credits each)	6
Conducting Seminar/Score Reading (4 semesters - 1 credit hour each)	4
Thesis/Recital (includes private conducting and recital during last semester)	6
Music History/Literature Electives	6
Elective Ensembles (4 semesters - 1 credit each)	4
Graduate Music Electives	4
Orchestral (conducting) (36 semester hours)	
Analytical Techniques	3
Orchestral Literature	3
Graduate Orchestral Conducting (3 semesters - 2 credits each)	6
Conducting Seminar/Score Reading (4 semesters - 1 credit each)	4
Thesis/Recital (includes private conducting and recital during last semester)	6
Music History/Literature Electives	6
Elective Ensembles (4 semesters - 1 credit each)	4
Graduate Music Electives	4

IV. Jazz Studies (36 credit hours)

Applied Music (major instrument) (3 semesters - 2 credits each)	6
Studio Jazz Band (4 semesters - 1 credit each)	4
Graduate Jazz Combo (2 semesters - 1 credit each)	2
Graduate Jazz Piano (not required of Jazz Piano principals)	1
Business of Music	1
Advanced Jazz Rehearsal Techniques or Jazz Pedagogy	2
Advanced Jazz Techniques (select from Improv, Style, Literature 2 semesters - 2 credits each)	3
Analytical Techniques	3
Jazz History Elective	3
Jazz Arranging/Composition Elective, Arr for Big Band, Arr for Combo, Private Jazz Comp (students may take 4 semesters of these courses in lieu of 8 hours of applied music)	2
Thesis/Recital (includes private lessons and recital during last semester)	6
Music Technology Elective (from Electronic Music I-III)	2

Music Education**Degree hours: (35)****Professional Education (9)**

EDF 6608	Social, Philosophical and Historical Foundations of Education	3
EDP 6211	Psychological Foundations of Education	3
EDF 5481	Analysis and Application of Educational Research	3

Music Education (12)

MUE 6349	Methodology of Music	3
MUE 6938	Seminar in Music Education	3
MUE 6815	Psychological Foundations of Music Behavior	3
MUE 6785	Research in Music Education	3

Music Courses (3)

Music Literature	3
(Chosen with advisor approval)	
Teaching Field: Music	11

Physics

Stephan L. Mintz, Professor and
Chairperson

Werner Boeglin, Assistant Professor

Richard A. Bone, Professor

Yesim Darici, Associate Professor

Rudolf Fiebig, Professor

Bernard Gerstman, Associate
Professor

Kenneth Hardy, Professor

Laird H. Kramer, Assistant Professor

Pete C. Markowits, Assistant Professor

Oren Maxwell, Associate Professor

Brian A. Raue, Assistant Professor

John W. Sheldon, Professor

Caroline E. Simpson, Assistant
Professor

Nongjian Tao, Assistant Professor

Walter van Hamme, Associate
Professor

Xuewen Wang, Associate Professor

James R. Webb, Associate Professor

Yifu Zhu, Assistant Professor

Master of Science in Physics

The Master of Science in Physics is a 45 semester hour program consisting of coursework at the 5000 and 6000 level and research with one of the departmental research groups culminating in a master's thesis. Students entering the program must have a bachelor's degree or equivalent coursework in Physics.

Required Courses:

PHY 5115	Mathematical Physics I	3
PHY 5116	Mathematical Physics II	3
PHY 5240	Advanced Classical Mechanics	3
PHY 5346	Advanced Electromagnetic Theory I	3
PHY 5347	Advanced Electromagnetic Theory II	3
PHY 6645	Advanced Quantum Mechanics I	3
PHY 6646	Advanced Quantum Mechanics II	3
PHY 6524	Statistical Physics	3
PHY 6935	Graduate Research Seminar	4-6

In addition, three semester hours of specialized coursework are required in the student's area of specialization and 12-14 hours of thesis work for a total of 45 hours.

Course Descriptions

Definition of Prefixes

AST-Astronomy; PHS-Physics/Specialized; PHY-Physics; PHZ-Physics; PSC-Physical Sciences; ENU-Nuclear Engineering.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

AST 5215 Stellar Astrophysics (3) Topics in Stellar Astrophysics, in greater detail and depth than similar topics in AST 3213. Emphasis on current stellar structure, evolution models and the underlying observational data. Prerequisites: PHY 3124, PHY 3503, PHY 4324, PHY 4222 or equivalent. (F or S)

AST 5405 Extragalactic Astrophysics (3) Topics in extragalactic astrophysics, in greater detail and depth than similar topics in AST 3213. Emphasis on galactic structure and evolution, quasars and cosmology. Prerequisites: PHY 3124, PHY 3503, PHY 4324, PHY 4222 or equivalent. (F or S)

AST 5507 Celestial Mechanics (3) Principles of classical Newtonian mechanics applied to the motions of planets, satellites, and interplanetary space probes. Prerequisites: PHY 4222 or equivalent. (F or S)

PHY 5115 Mathematical Physics I (3) Methods of solution for problems in mathematical physics: Variational principles, complex variables, partial differential equations, integral equations, and transforms. Prerequisites: MAC 3313, MAP 3302. (F)

PHY 5116 Mathematical Physics II (3) Additional solution methods in mathematical physics: Perturbation methods, Laplace's and Poisson's Equations, waves, special functions, vector fields, vector waves. Prerequisite: PHY 5115. (S)

PHY 5235 Nonlinear Dynamics and Chaos (3) Introduction to the universal behavior of classical systems described by nonlinear equations. Prerequisites: PHY 4222, MAA 4211. (F or S)

PHY 5240 Advanced Classical Mechanics (3) Advanced formulations of the equations of motion and their applications: the central field problem, rigid body dynamics, oscillations and continuous systems. Prerequisite: PHY 4222. (F)

PHY 5346 Advanced Electromagnetic Theory I (3) Advanced treat-

ment of classical electromagnetism: Electrostatics, Green's function, Laplace's equation, multipole expansion, magneto-statics, Maxwell's equations, waves. Prerequisite: PHY 4324. (F)

PHY 5347 Advanced Electromagnetic Theory II (3) Additional topics in classical electromagnetism: Wave guides, radiating and diffracting systems, Kirchhoff's integral for diffraction, covariant formulation of field equations. Prerequisite: PHY 5346. (S)

PHY 5446 Laser Physics (3) Principles of lasers and laser applications, including atom-field interactions, stimulated emission and dipole oscillators, optical resonators and electromagnetic modes, semiclassical laser theory, and specific laser systems. Prerequisite: PHY 4605. (F or S)

PHY 5667 Nonperturbative Quantum Field Theory (3) Euclidean QFT, renormalization group, local gauge symmetry, lattice regularization, Wilson action, fermion fields, expansion schemes, numerical algorithms, hadron properties, recent developments. Prerequisites: PHY 4605.

PHY 5930 Seminar in Physics (1-3) A series of specialized lectures/seminars on selected topics in Physics/Astro-Physics. Prerequisites: Permission of Department.

PHY 5936 Special Topics Research (1-10) Participation in an original investigation in theoretical or experimental physics/astro-physics under direct faculty supervision. Prerequisite: Permission of instructor.

PHY 5937, PHY 5938 Seminar in Special Topics (3) Seminar work under the supervision of a faculty member on subject material of mutual interest.

PHY 5940 Physics Graduate Teaching Workshop (1) The teaching of physics laboratories. Includes practice of lab experiments, use and adjustment of lab equipment and explanation of departmental grading policy. Supplemented by outside lectures on university policies. (F)

PHY 6524 Statistical Physics (3) Fundamental principles of statistical mechanics; fluctuations, noise and irreversible thermodynamics; kinetic methods and transport theory. Prerequisites: PHY 3503 and PHY 4222. (S)

PHY 6645 Advanced Quantum Mechanics I (3) Advanced topics in quantum mechanics: Quantized sys-

tems, relativistic quantum mechanics, potential scattering. Prerequisite: PHY 4605. (F)

PHY 6646 Advanced Quantum Mechanics II (3). Additional topics in advanced quantum mechanics: Collision theory, symmetry transformations, conservation laws, group theory. Prerequisite: PHY 6645. (S)

PHY 6651 Quantum Scattering Theory I (3). The investigation of atomic and electronic scattering processes: Potential scattering, long range potentials, electron-atom collisions. Prerequisite: PHY 6645.

PHY 6652 Quantum Scattering Theory II (3). The mathematical investigation of scattering processes: Auto-ionization, fast vs. slow collisions, Regge poles, S and T matrices. Prerequisite: PHY 6651.

PHY 6668 Relativistic Quantum Field Theory I (3). Introduction to relativistic quantum fields: General formalism, Klein-Gordon field, Dirac field, vector fields, interacting fields, CPT theorem, reduction formulae, gauge theory. Prerequisite: PHY 6646.

PHY 6669 Relativistic Quantum Field II (3). Additional topics in relativistic quantum fields: perturbation theory, U matrix, Wick's theorem, dispersion relations, renormalization, Ward identity, renormalization group, path integral formalism. Prerequisite: PHY 6668.

PHY 6675 Quantum Theory of Many Particle Systems I (3). An introduction to the physics of many particle systems: Second quantization, Fock spaces, Boson and Fermion symmetry, Gell-Mann-Low theorem, diagrammatic expansions, Goldstone theorem. Prerequisite: PHY 6646.

PHY 6676 Quantum Theory of Many Particle Systems II (3). Additional topics in the physics of many particle systems: Fermi gas, Bose condensation, Hartree-Fock approximation, random phase approximation, finite temperature formalism, hadrons. Prerequisite: PHY 6675.

PHY 6935 Graduate Research Seminar (1-2). Seminars presented by students, faculty, and visitors on a variety of topics of current research interest. Repeatable. Required every semester. (F and S)

PHY 6970 Thesis Research (1-10). Research toward completion of Master's Thesis. Repeatable.

Prerequisite: Permission of Department. (F,S)

PHY 6971 Master's Thesis (3). Theoretical and/or experimental research leading to thesis. Prerequisite: Permission of major professor. (F,S)

PHY 7980 Dissertation Research (1-9). Students conduct dissertation research at the doctoral level in theoretical or experimental physics under faculty supervision. Prerequisite: Permission of instructor. (F, S)

PHZ 5130 Theoretical Treatment of Experimental Data (3). Statistical analysis of physical processes and statistical tests, with particular emphasis on instrumentation-related problems. Mathematical modeling and computer simulation. Prerequisite: Undergraduate statistics course, or equivalent, or permission of instructor.

PHZ 5234 Atomic and Molecular Collision Phenomena (3). Investigation of atomic and molecular collision phenomena: Kinetic theory, elastic scattering, inelastic scattering, excitation and ionization, heavy particle collisions. Prerequisites: PHY 4605 and PHY 4222. (F or S)

PHZ 5304 Advanced Nuclear Physics (3). The fundamental properties of nuclei, nuclear forces, nuclear models, radioactivity, weak processes, and nuclear reactions. Prerequisite: PHY 4604. Corequisite: PHY 4605. (F or S)

PHZ 5405 Solid State Physics (3). Crystalline form of solids, lattice dynamics, metals, insulators, semi-conductors, crystalline surfaces, and amorphous materials. Prerequisites: PHY 3124 or CHM 3411.

PHZ 5505 Low Energy Plasma Physics (3). The investigation of the kinetics of rarefied gases and thermal plasmas: Phase space, random currents, orbit theory, plasma sheaths, radiation, the pinch effect. Prerequisites: PHY 3503, PHY 4324, and PHY 4222.

PHZ 5506 Plasma Physics (3). An introduction to plasma fundamentals, the Boltzmann equation, the hydrodynamic equations, orbit theory, the interaction of electromagnetic waves with plasmas, the pinch effect and instabilities. Prerequisite: PHY 3049. (F or S)

PHZ 5606 Special Relativity (3). A detailed study of special relativity: Lorentz transformations, relativistic

electrodynamics. Prerequisite: PHY 3124.

PHZ 6255 Molecular Biophysics (3). The use of theoretical physics techniques to investigate biological systems: Protein structure and dynamics, electron tunneling, nuclear tunneling, hemoglobin, photosynthesis, vision. Prerequisite: PHY 4605. (F or S)

PHZ 6326 Low Energy Nuclear Physics I (3). Introduction to the physics of nuclei and nuclear processes: Nuclear forces, scattering processes and nuclear models. Prerequisite: PHY 4605.

PHZ 6327 Low Energy Nuclear Physics II (3). Additional topics in nuclear physics: The shell and collective models, nuclear reactions and applications, scattering theory, entrance channel phenomena, rearrangement collision and breakup reactions. Prerequisite: PHZ 6326.

PHZ 6354 Introduction to Particle Physics (3). An introduction to modern particle theory: Elementary field theory, symmetries, quantum electrodynamics, quark-parton model, quantum chromodynamics, Weinberg-Salam model. Prerequisite: PHY 6646.

PHZ 6359 Quantum Gauge Field Theories (3). Basics in field quantization, nonabelian symmetries, the standard $SU(3) \times SU(2) \times U(1)$ model, non-perturbative features, lattice regularization and numerical simulation. Prerequisites: PHY 4605, PHY 5346. (F or S)

PHZ 6426 Advanced Solid State Physics (3). Electronic structures of solids and surfaces, electron-electron interaction, superconductivity, magnetism in solids, amorphous systems, glasses, polymers, percolation, localization, phase transition, fractals. Prerequisites: PHY 4324 and PHY 4605. (F or S)

Political Science

John Stack, *Professor and
Chairperson*

Virginia Chanley, *Assistant Professor*

Ronald Cox, *Associate Professor*

Bruce Detwiler, *Associate Professor*

Eduardo Gamarra, *Associate
Professor*

Joel Gottlieb, *Associate Professor*

Ivelaw Griffith, *Associate Professor*

Kevin Hill, *Assistant Professor*

Heidi Hobbs, *Assistant Professor*

Antonio Jorge, *Professor*

Dario Mareno, *Associate Professor*

Brian Nelson, *Associate Professor*

Nicol Rae, *Associate Professor*

William Reno, *Assistant Professor*

Mark Rosenberg, *Professor*

Cheryl Rubenberg, *Associate
Professor*

Rebecca Salokar, *Associate
Professor*

Judith H. Stiehm, *Professor*

Mary Volcansek, *Professor*

Christopher Warren, *Associate
Professor*

The Master of Arts and the Doctor of Philosophy Degrees in Political Science at Florida International University are designed to provide students with a comprehensive knowledge of political science. The graduate program in Political Science builds on faculty strengths and distinguishes itself by stressing a comparative approach to the study of politics. The program is designed to equip its graduates with a solid foundation in the basic theories and methods of Political Science, in conjunction with an in-depth education in selected traditional sub-fields. The program has a particular focus on Comparative politics and American politics.

Admission Procedures

Applicants seeking admission for the Fall semester should have application materials submitted by May 1st. Incomplete applications can not be considered by the Graduate Admission Committee. Admission decisions will be announced no later than June 1st.

The following application materials must be submitted to the University's Admissions Office.

1. A completed FIU Graduate Application form with requisite application fees.
2. Official transcripts of all university-level work, including undergraduate or professional school courses.

3. An official report of Graduate Record Examination (GRE) scores.

4. All foreign students whose native language is not English must submit official reports of Test of English as a Foreign Language (TOEFL).

Note: Applicants must also send copies of the above materials directly to the Department's admissions committee at the following address: Department of Political Science, DM 483, University Park Campus, Miami, FL 33199. Telephone: (305) 348-2226. Fax: (305) 348-3765.

Applicants must send the following materials directly to the department's admissions committee.

1. Two letters of reference from former instructors who are able to evaluate the applicant's potential for graduate study. Applicants should ensure that each letter is signed by the author along the sealed flap of the envelope.
2. A personal statement of intent, including a discussion of education and career objectives and the specific relationship of a master's degree in Political Science to the achievement of those objectives. The personal statement should not exceed three typewritten, double-spaced pages.

Admission Requirements

Admission to the M.A. program is competitive. Meeting the minimum requirements does not guarantee acceptance. The minimum requirements for admission to the M.A. program include:

1. A baccalaureate degree from an accredited college or university.
2. A minimum 3.2 grade point average (on a 4.0 scale) during the last two years of a student's undergraduate program (students with graduate or professional course work will be evaluated individually).
3. A minimum combined score of 1000 or higher on the verbal and quantitative sections of the GRE.
4. Foreign students whose native language is not English must have a TOEFL (Test of English as a Foreign Language) score of 500 or higher.

The admission requirements for the Ph.D. program includes a Bachelor's or Master's degree from an accredited institution of higher education. Applicants must supply college transcripts, letters of recommendation, and GRE scores (1000 is the normal minimal score required for admission to the Doctoral program). The GRE Political Science ex-

amination is not required. Students whose native language is not English will be required to achieve a score of at least 550 on the TOEFL exam. Normally, an undergraduate GPA of 3.2 and/or a graduate GPA of 3.25 is required for admission. Students should provide a writing sample. An M.A. thesis or a major research paper should generally be submitted as the sample. A short statement of purpose is also required. Students will also be required to comply with the University's requirements.

Financial Aid

The program has a limited number of graduate assistantships available for qualified students. Assistantships are awarded on a competitive basis only to full-time students. Students applying for full-time status are considered automatically for these awards. Assistantships are renewable for up to four years based on satisfactory academic progress.

The University also grants 'need based' financial aid. For information on these awards call the Financial Aid Department at (305) 348-2431.

M.A. Degree Requirements

The course of study for the M.A. in Political Science requires 30 credit hours. A final research project and research seminar are required components:

Required Courses

POS 5716	Foundations of Political Science
POS 5706	Research Methodology
POS 6976	Research Seminar

Core Courses

Each student is required to take three of the following four core courses:

POS 5045	Seminar in American Politics
CPO 5091	Seminar in Comparative Politics
INR 5007	Seminar in International Politics
POT 5007	Seminar in Political Theory

Electives

Students are required to take four elective courses. A student may also take a maximum of six credit hours in a cognate field or in an approved cognate program.

Ph.D. Requirements

The Doctor of Philosophy in Political Science is conferred based on satisfactory completion of required

coursework, a demonstrated mastery of a broad field of knowledge, and the ability to conduct original and independent research. The degree provides graduates with a solid foundation in the basic theories and methodologies of Political Science in conjunction with specialization in traditional sub-fields. The Ph.D. program requires a minimum of 90 credit hours beyond the Bachelor's degree.

Summary of Course Requirements (90):

Required Courses	10
Common Core Courses	12
Three Examination Fields	24-45
Dissertation	24-45

Students will, in consultation with their faculty advisors, determine the contents of their course work. Students will also specialize in three of five examination fields. Four of the possible fields are based on the traditional substantive areas of Political Science (American Politics, Comparative Politics, International Politics, and Political Theory). A fifth field (Area Studies) allows students to concentrate on either a regional area or substantive issue. Normally, all students will take 12 credit hours in disciplines outside the Political Science department.

Students' proposed programs must be approved by their advisors and the graduate studies committee. A minimum of three semesters of full-time residency (nine-hours per semester) is expected prior to filing for the qualifying examinations. Therefore, examinations usually will be administered near the end of the third term or the beginning of the fourth term of residency.

Required Courses

POS 5702	Teaching Political Science
POS 5706	Research Methodology
POS 5716	Foundations of Political Science
POS 6918	Seminar in Political Science Methodology

Secondary Core Courses

CPO 5091	Seminar in Comparative Politics
INR 5007	Seminar in International Politics
POS 5045	Seminar in American Politics
POT 5007	Seminar in Political Theory

Fields

Comparative Politics
International Politics
American Politics
Political Theory
Area Studies

Language Requirement

The Political Science Ph.D. Program requires competency in one foreign language, or demonstrated competency in computer and methodological techniques when considered more appropriate. Language competency must be demonstrated prior to taking the qualifying examinations.

Comprehensive Examination

After satisfactory completion of course work, all students will take comprehensive exams before starting work on the dissertation; that is, before being admitted to candidacy. The comprehensive exams will cover core courses and functional fields.

Dissertation

After passing the comprehensive exams, students are admitted to candidacy. At this point students enroll for dissertation credits under the supervision of their dissertation advisors.

Course Descriptions

Definition of Prefixes

CPO-Comparative Politics; INR-International Relations; POS-Political Science; POT-Political Theory; PUP-Public Policy.

CPO 5036 Politics of Development

(3). This course examines divergent explanations for development and underdevelopment. Of central importance are the concepts and theories which emphasize the political dimensions of development, including theory and concept, processes of development, and actors in the development process.

CPO 5091 Seminar in Comparative Politics

(3). A foundation in the development of the field of comparative politics and in the major schools of thought that have molded perspectives on comparative political analysis.

CPO 5325 Politics of the Caribbean

(3). Examines the structural and institutional aspects of the politics of the Caribbean in both domestic and international contexts. Prerequisite: Graduate standing.

CPO 5934 Topics in Comparative Politics (3). A rigorous examination of a topic in comparative politics. Subject matter varies according to instructor. Topic will be announced in advance.

CPO 5936 Seminar in Comparative Political Parties (3).

Students read and discuss major works on parties by conservative, liberal, and marxist authors.

CPO 6062 Seminar in Comparative Judicial Politics (3).

An examination of judicial structures, legal traditions, judicial behavior and judicial power cross culturally.

CPO 6066 Comparative Constitutional Law (3).

An examination of constitutionalism in both established and developing democracies. Particular emphasis on the role of courts, judicial review and judicial remedies using doctrinal, contextual and theoretical analyses.

CPO 6106 Seminar on European Politics (3).

Advanced discussion of major themes in European politics. Topics include corporatism, post-materialism, democratization, and European integration.

CPO 6206 Seminar in African Politics (3).

Studies the crisis of African development. Topics include colonialism, internal cleavages, and impact of the global economy.

CPO 6307 Seminar on South American Politics (3).

Explores the realities and myths of the democratization experience of South America.

CPO 6376 Seminar in Central American Politics (3).

Central America's Socio-Political Evolution. Attention is given to both the National and International Politics of the region.

CPO 6407 Seminar in Politics of the Middle East (3).

In depth analysis of comparative theoretical perspectives of political processes in the Middle East.

INR 5007 Seminar in International Politics (3).

An advanced graduate course designed to give students a specialized knowledge of the classics in international politics. The course traces the development of international politics from Thucydides to the present.

INR 5087 Ethnicity and the Politics of Development (3).

This course examines the conceptual and substantive dimensions of ethnicity in the context of world politics and politi-

cal development. The course will highlight ethnicity and ethnic groups as critical factors in North-South politics.

INR 5105 American Foreign Policy (3). Compares different perspectives in foreign policy analysis. Provides a comprehensive understanding of major issues in U.S. policy.

INR 5414 Topics in International Law (3). An intensive examination of the political dimensions of international law in the context of rapidly changing global political relations.

INR 5934 Topics in International Politics (3). A rigorous examination of a topic in international politics. Subject matter varies according to instructor. Topic to be announced in advance.

INR 6080 Seminar on Non-State Actors (3). Explores the nature of non-state actors in International Politics, including cities, interest groups, multinationals, and individuals.

INR 6205 World Politics (3). This course provides graduate students with an understanding of the major conceptual approaches to world politics. It emphasizes the analysis of significant actors, institutions, and processes at work in the contemporary global system as well as possible future alternatives.

INR 6705 Seminar in International Political Economy (3). Theories of economic cooperation and conflict among nation-states. Liberal, economic nationalists and marxist theoretical paradigms are explored in an examination of the internationalization of capital, trade and investment and the role of the State in the global economy.

INR 6936 Seminar in Inter-American Politics (3). Focus on U.S.-Latin American relations. Attempts to link the theoretical literature on U.S. foreign policy with empirical developments.

INR 6939 Seminar in International Law (3). Allows for specialized and topical offerings by regular and visiting faculty. Also permits experimental courses.

POS 5045 Seminar in American Politics (3). The advanced study of U.S. politics. Students read and discuss the major works and theories concerning American politics and government.

POS 5146 Seminar in Urban Politics (3). Examination of processes by which urban areas are governed. Emphasis is on conflicts over structures, power, policy and the politics of ethnicity and class.

POS 5158 Topics in Politics (3). Subject matter varies according to instructor.

POS 5208 Seminar in Political Behavior (3). Analyzes the literature in political behavior. Special emphasis is on voting, socialization, attitudes, partisanship, campaigning, the media, and political participation in the developed democracies. Prerequisite: Seminar in Political Science Methodology.

POS 5447 Seminar in U.S. Political Parties (3). Students read and discuss the major works and theories on U.S. Political Parties.

POS 5638 Topics in Public Law (3). A rigorous examination of a topic in public law. Subject matter varies according to instructor. Topic will be announced in advance.

POS 5702 Teaching Political Science (1). Introduces graduate students to the pedagogical and practical aspects of teaching political science. Topics will include selecting books, writing a syllabus, lecturing, running discussion groups, and testing and grading. Covers professional ethics, and student rights and responsibilities.

POS 5706 Research Methodology (3). This course is an introduction to the principal concepts and techniques of quantitative and non-quantitative methodology in the social sciences. It is designed to familiarize the student with the language and format of quantitative and non-quantitative applications in order to permit students to deal effectively with the literature of their field.

POS 5716 Foundations of Political Science (3). Prepares students for the advanced study of politics. Areas of study include history of Political Science as a discipline, comparison of classical and modern sciences of politics and realpolitik, epistemological foundations.

POS 5909 Independent Study (1-6). Designed for advanced students who wish to pursue specialized topics in political science. Arrangements must be made with instructor during prior semester.

POS 5932 Topics in Urban Politics (VAR). An extensive examination of the processes by which social conflicts in American urban areas are represented and regulated. Emphasis is on the ways in which urban problems are identified and proposed solutions formulated, legitimized, and administered by urban policy-making processes. Includes a discussion of urban political culture.

POS 6072 Seminar in U.S. Political Economy (3). Examines core issues related to the U.S. political-economic system, and the challenge of business to democracy. The student to understand the major problems confronting communities in urban areas.

POS 6266 Community POWER Theory (3). Studies the concept of power in the U.S. and classics of community power literature.

POS 6286 Judicial Research (3). Examination of the methodological approaches used to study courts in a political context. Special attention to seminal works that focus on individual, small group and institutional behavior, and extra-legal influences.

POS 6415 Seminar on the U.S. Presidency (3). Examines the most important works on the U.S. Presidency, and the evolution of the office since 1789.

POS 6427 Seminar on the U.S. Congress (3). Discussion of the scholarly literature on Congress. Students analyze trends in Congressional power and possible reforms.

POS 6639 Seminar in Public Law (VAR). Graduate seminar on special topic in public law. Topic to be announced in advance.

POS 6918 Seminar in Political Science Research Methods (3). Examines the methods used to design, execute, and critique empirical research in political science, addressing a variety of methodological issues. Prerequisites: POS 5706 and POS 5716.

POS 6937 Seminar in Politics (VAR). Subject matter varies according to instructor.

POS 6971 Thesis (1-6). Requires students to enroll for thesis or dissertation research for at least one credit hour every semester in which they are engaged in such research. Prerequisites: All other coursework for the Master's.

POS 6976 Research Seminar (3). Required course for all MA candidates during completion of their major research project. The course guides student research while in progress. Prerequisite: POS 5707.

POS 7980 Dissertation (3-12). Supervised research and writing of an original research project. Prerequisites: Candidacy and permission of advisor.

POT 5007 Seminar in Political Theory (3). An examination of writings from a diverse list of some of the major political theorists in the western tradition from antiquity to the present.

POT 5307 Feminist Political Theory (3). Examines feminist political theory in the second half of the twentieth century with the focus on the work of U.S. scholars.

POT 5326 Graduate Seminar in Class Analysis (3). The theoretical and empirical issues associated with class divisions in contemporary societies. Theoretical debates regarding definitional problems of class identity and empirical case studies highlight class conflict and stratification.

POT 5934 Topics in Political Theory (3). An intensive examination of selected topics dealing with political theory. Subjects will vary, depending upon the desires of students and faculty. Allows the student to choose topics of particular interest to him or her.

POT 6015 Seminar in Classical Political Thought (3). Examination of key elements of classical political thought from the Hellenic to early Christian periods.

POT 6056 Seminar in Modern Political Thought (3). Examines important works and theories of political thought from the renaissance to the early 19th century.

POT 6067 Seminar in Contemporary Political Thought (3). Examines political theories of the 19th and 20th centuries. Special emphasis on the tension between modern and post-modern theory.

POT 6208 Seminar in American Political Thought (3). Students read and discuss classic and contemporary interpretations of U.S. political thought, and apply those ideas to modern U.S. politics.

POT 6303 Seminar on Self and Polity (3). Focuses on conceptions of self that are reinforced by different political

regimes. Examines humanities and social science works that address self and polity issues.

POT 6416 Seminar in Marxism (3). Analysis of the evolution of Marxism from Marx to the present. Particular attention is given to contemporary Marxist debates.

POT 6603 Political Theory of the Modern State (3). Analyzes evolution and theories of the modern state from the high middle ages to the present. Pre-state formations, classical states, and social science theories of the state are also discussed.

PUP 5934 Topics in Public Policy (1-6). A rigorous examination of a topic in public policy. Subject matter varies according to instructor. Topic will be announced in advance.

PUP 6007 Seminar in Public Policy (1-6). Graduate seminar on special topic dealing with public policy analysis. Subject matter varies according to instructor. Topic to be announced in advance.

Psychology

Scott Fraser, Associate Professor and Chairperson

Lorraine Bahrack, Associate Professor

Milton Blum, Professor Emeritus

Margaret Bull-Kovera, Assistant Professor

Brian Cutler, Associate Professor

Marvin Dunn, Associate Professor

Joan Erber, Professor

Luis Escovar, Associate Professor

Gordon Finley, Professor

Ronald Fisher, Professor

Arthur Flexser, Associate Professor

Leslie Frazier, Assistant Professor

Jacob Gewirtz, Professor

Fernando Gonzalez-Reigosa,

Associate Professor

Margaret Kovera, Assistant Professor

Lowell Krokoff, Associate Professor

William Kurtines, Professor

Mary Levitt, Associate Professor

Michael Markham, Assistant Professor

Michelle Marks, Assistant Professor

Gary Moran, Professor

Janet Parker, Professor

James Rotton, Associate Professor

Juan Sanchez, Associate Professor

Bennett Schwartz, Assistant Professor

Wendy Silverman, Professor

Jonathan Tubman, Assistant Professor

Chockalingam Viswesvaran, Assistant Professor

Master of Science in Psychology

The Masters of Science in Psychology program at the University is designed to train practitioners and researchers who can function in a variety of applied settings. The core curriculum and admission prerequisites are intended to provide students with a base of knowledge in psychology. A distinctive feature of the program is its emphasis on a close working relationship between student and faculty. Under faculty supervision, students are encouraged to develop individually tailored programs of study that reflect both student interests and program strengths.

The curriculum consists of 36 semester hours of graduate study in which the exposures focus specifically on training the student to perform the skills mentioned above. Students are expected to select electives, project/thesis topics, and supervised field experiences that meet not only the degree require-

ments, but also their academic interest and particular professional objectives. Six of the 36 semester credit hours consist of Master's thesis credits.

Doctor of Philosophy in Psychology

The doctorate program in psychology has a two-fold focus: (1) Life-span development (2) applied psychology. The program emphasizes normal development as well as cross-cultural and urban perspectives on the life span and legal and industrial/organizational applied psychology. The emphasis is on academic quality and the curriculum is designed to foster a commitment both to basic research and to application as an integral part of the individual student's specialty area development. The curriculum offers a broad background in life-span development and applied psychology while encouraging the development of an area of specialization early in graduate training.

Students are expected to master a series of core-course requirements designed to facilitate a thorough grounding in theory, methodology, and content both in basic and applied research. In addition, a number of seminars reflecting specialized foci are offered. Students are also required to pursue specific areas of interest through independent study with individual faculty members and through apprenticeship with a primary advisor for the purpose of acquiring direct research experience.

Graduate Admission Requirements

The following are in addition to the University's Graduate Admission Requirements:

1. A 3.0 or higher GPA during the last two years as an upper division student and a total score (quantitative plus verbal) of 1,000 or higher on the GRE for the Master's degree. A 3.0 or higher GPA and a GRE verbal and quantitative of 1,100 or higher are required for the Ph.D. degree. Foreign students whose native language is not English must take the Test of English as a Foreign Language (the TOEFL examination) and obtain a 580 score or higher.

2. The GRE and GPA stated above are only minimum requirements. All applications are reviewed by the Program Area Admission

Committee, which makes the final admissions decisions. Since admission to the program is competitive, the committee's requirements are normally higher than the minimum aforementioned standards.

Graduate Admissions Procedures

Applicants must submit the following to the Graduate Studies Admission Committee, Department of Psychology, Florida International University, Miami, Florida 33199:

1. A photocopy of the admission application submitted to the Admissions Office.

2. A brief essay stating the reasons for the interest in the program and career goals.

3. Three letters of recommendation, preferably from previous instructors and/or persons familiar with applicant's academic background.

Applicants to the program who are not psychology majors may be accepted conditionally until they meet the category requirements, listed below, early in their graduate career. A maximum of nine semester hours credit earned in the non-degree seeking student category exclusive of prerequisite undergraduate courses may be applied to graduate degree requirements. The undergraduate course requirements are designed to make certain that students accepted into the graduate program have a broad base of dependable psychological knowledge and acquaintance with the basic methodologies upon which the discipline is founded.

Category A. Satisfactory completion of one psychology laboratory or research methods course.

Category B. Satisfactory completion of introductory upper division statistics.

Deadline for review of completed applications is January 15 for fall admission.

Course Descriptions

Definition of Prefixes

CLP-Clinical Psychology; CYP-Community Psychology; DEP-Developmental Psychology; EAB-Experimental Analysis of Behavior; EDP-Educational Psychology; EXP-Experimental Psychology; INP-Industrial and Applied Psychology; LIN-Linguistics; PCO-Psychology for Counseling; PPE-Psychology of Per-

sonality; PSB-Psychobiology; PSY-Psychology; SOC-Sociology; SOP-Social Psychology; SPA-Speech Pathology and Audiology.

CLP 5166 Advanced Abnormal Psychology (3). Advanced study of the causes, psychopathology manifestations, and social and personal consequences of behavior disturbance. Emphasis is placed on the critical examination of current research on the biological, psychological, and social aspects of these disorders. Clinical approaches to diagnosis, course, and prognosis in the contemporary mental health context (including 'practicum' assignments if feasible) are covered.

CLP 5169 Proseminar in Developmental Psychopathology (3). A comprehensive review of topics in developmental psychopathology including history, scope, methods, individual and contextual influences, developmental course, long-term outcomes, and resilience. Prerequisites: Graduate standing or permission of instructor.

CLP 5175 Personality Dynamics (3). A review of different approaches to the study of personality. Prerequisites: Successful completion of a course in theories of personality, or equivalent. Permission of instructor.

CLP 5185 Current Issues in Mental Health (3). A critical, intensive examination of selected, important issues in mental health. Emphasis is given to the empirical study of contemporary problems related to the making of mental patients; planning, programming, and administering mental health services; political, ethical, and legal constraints on the operation of mental health facilities; interdisciplinary cooperation among helping and human service professionals; and evaluation of preventive care and treatment services. Prerequisite: Abnormal Psychology or permission of the instructor.

CLP 5931 Ethical Code in Psychological Practice (2). An examination of the ethical standards for psychological practice as established by the American Psychological Association, and the Association's standards for delivery of psychological services. Prerequisite: Admission to graduate study in psychology; (other graduate students admitted by permission of instructor).

CLP 6168 Psychopathology Across the Life-Span (3). Exploration of the causes of psychopathology from a

life-span developmental orientation and implications for theories of personality. Prerequisites: CLP 5166 and permission of instructor.

CLP 6375 Clinical Psychology (3). Introduction to the science-profession of clinical psychology, as it is applied to preventing, diagnosing and treating maladaptive or deviant human behavior and relationships. Prerequisites: Admission to the Graduate Program in Psychology or Education and permission of instructor.

CLP 6395 Forensic Psychology (3). This course surveys the practical and ethical issues surrounding the interface between clinical psychology and the law. Prerequisite: CLP 4144, CLP 6168 or equivalent of either.

CLP 6436 Introduction of Psychological Assessment (3). This course provides instruction in the principles and methods underlying the administration, construction and evaluation of psychological tests and measures. Prerequisite: Graduate standing.

CLP 6437 Behavioral Assessment in Childhood (3). Standardized tests and inventories for the behavior assessment of infants, children, and adolescents will be surveyed. Prerequisites: Proseminar courses and second year graduate standing.

CLP 6438 Psychological Assessment (3). Theory, research, and applications of psychological assessment in areas such as interviewing, intellectual and cognitive functioning, and personality testing. May be repeated for credit with different subject matter. Prerequisite: STA 3122 and permission of instructor.

CLP 6498 Diagnosis and Treatment of Sexual Disorders (3). Clinical examination of sexual functioning, emphasizing disorders of gender identity, paraphilias and other dysfunctions and intimacy problems. Prerequisite: Graduate standing or permission of instructor. Corequisites: SOP 3772 or equivalent.

CLP 6945 Clinical Practicum in Psychology (1-3). Supervised experience in clinical techniques and methods. Prerequisites: Graduate standing & permission of instructor.

CLP 6948 Clinical Internship (1-3). Clinical Internship in Psychology for Ph.D. candidates who have completed the Clinical Practicum and at least 45 graduate credit hours.

Prerequisites: Graduate standing and permission of instructor, CLP 6945.

CYP 5534 Groups as Agents of Change (3). Theory and practice in utilizing groups as agents of change or development in communities and organizations. Didactic presentation and structured exercises focus on relevant issues. Students design and implement problem-focused interventions, using class as client system.

CYP 5954 Community Psychology Field Experiences II (5). Same orientation and description as Field Experience I. Students in this course will be able to pursue their work with community institutions in more depth. Prerequisite: Students enrolled in this course must have completed Community Psychology Field Experiences I.

CYP 6526 Psychological Methods of Program Evaluation (3). Development of skills for the psychological assessment monitoring and evaluation of human service programs with emphasis on the application of basic principles of behavioral science research in the field, exclusive of public school settings.

CYP 6536 Principles and Methods of Psychological Consultation (3). An analysis of the basic psychological approaches underlying consultation, with special emphasis on the practical application of the processes of learning, cognition, and interpersonal relations to techniques of consulting with various 'target' agencies, individual clients, and other professionals in community settings. Prerequisite: Graduate standing at FIU or permission of instructor.

CYP 6766 The Psychology of Cross-cultural Sensitization in a Multicultural Context (3). A series of weekly seminars to increase student sensitivity to working with clients from different cultural backgrounds. The objectives of the course are: (1) facilitating student awareness of cultural differences and their impact on social and human services delivery systems, (2) identifying the student's own personal cultural biases and values when interacting with culturally different persons, and (3) teaching students to develop culturally appropriate intervention skills.

CYP 6936 Current Issues in Community Psychology (3). An intensive analysis of contemporary theoretical, practical, and professional aspects of the field of Community

Psychology. Topics discussed may lead to the graduate project required of each student. Prerequisite: Admission to graduate study in psychology (other graduate students admitted by permission of instructor).

DEP 5044 Psychology of Moral Development (3). Introduction to the literature on moral development. Review and discussion of recent developments in this area. Prerequisites: Graduate standing or permission of instructor.

DEP 5056 Issues in Life-Span Developmental Psychology: Infancy through Old Age (3). A survey in depth of theories, issues, methods, and data in life-span developmental psychology through the entire age range. Prerequisites: DEP 3001 or DEP 4464, or their equivalents, are recommended.

DEP 5058 Biological Basis of Behavior Development (3). Introduction to theory and research underlying behavioral development. Covers such pre- and post-natal determinants as evolution, genetics, neuroendocrines, as well as social development, behavioral ecology, and sociobiology. Prerequisite: Graduate standing or permission of instructor. Corequisite: Proseminar courses.

DEP 5068 Applied Life Span Developmental Psychology (3). This course is designed to acquaint the student with various applications in life-span developmental psychology. An overview of general issues and areas of application is offered, and specific applications are considered. Prerequisite: Graduate standing or permission of instructor.

DEP 5099 Proseminar in Infancy, Childhood, and Adolescence (3). Provides a comprehensive review of issues in perceptual, cognitive, social, emotional, and personality development from infancy through adolescence. Prerequisite: Graduate standing or permission of instructor. Corequisite: Pro-seminars.

DEP 5118 Current Issues in Cognitive and Perceptual Development in Infancy (3). Provides an in-depth analysis of current issues, methods, research and theory of cognitive and perceptual development during the first year of life. Special emphasis on object and event perception, memory, and imitation. Prerequisites: Two courses in developmental psychology - any level recommended.

DEP 5185 Emotional Learning and its Reversal (3). Theoretical analyses and methodological issues in the study of emotional learning. Prerequisite: Graduate standing or permission of instructor.

DEP 5315 Proseminar in Parent-Child Relations (3). Provides an overview of key issues in parent-child relations including culture, socialization/genetics, fatherhood, timing, adoption, work, effects of children on parents, and parent training. Prerequisite: Graduate standing or permission of instructor.

DEP 5344 Psychology of Moral Development (1). A graduate survey of psychological theory, research, and application in the area of moral development. Prerequisites: Graduate standing or permission of instructor.

DEP 5405 Proseminar in Psychology of Adulthood and Aging (3). A comprehensive review of topics in adulthood and aging including: biological changes, social processes, work, family, cognition, memory, personality, and psychopathology. Prerequisite: Graduate standing or permission of instructor.

DEP 5608 Theoretical Perspectives in Developmental Psychology (3). The focus of this course is on the major paradigms, models, and theories that have been influential in developmental psychology, both historically and contemporaneously. Meta-theoretical issues, paradigmatic influences, and specific theories are considered. Prerequisite: Graduate standing or permission of instructor.

DEP 5725 Seminar in Psychosocial Development (1). This course is designed to develop research skills and competencies in the area of psychosocial development. The emphasis of the course is on involvement in original research. Prerequisite: Permission of instructor. Corequisite: Senior undergraduate or graduate standing.

DEP 5796 Methods of Developmental Research (3). Survey of issues and methods at all stages of life-span developmental research including theory, methods, design, and data reduction. Prerequisite: Graduate standing or permission of instructor. Corequisite: Proseminars.

DEP 6117 Psychology of Caregiving (3). An advanced seminar focusing on one or more topics in depth and

requiring literature reviews and research design. Topics may include timing of parenthood, adoption, and fatherhood.

DEP 6145 Psychology of Culture and Childhood (3). Extensive cross-cultural readings will serve as the focus for seminar discussion of cultural influences on children's biological, motor, perceptual, cognitive, social, and personality development. Prerequisite: Graduate standing or permission of instructor.

DEP 6186 Social Development and Learning (3). Theories and facts of socio-emotional development, learning, and the acquisition and maintenance of social relationships in early life are examined critically. Prerequisites: DEP 3000 or DEP 3001 or equivalent.

DEP 6465 Psychology of Culture and Aging (3). An intensive examination of cultural influences on social and psychological aging processes including minority aging and involving seminar discussion and independent projects. Prerequisite: Graduate standing.

DEP 6466 Cognitive Processes in Aging (3). An intensive analysis of the background and recent developments in the area of age changes and age differences in intellectual functioning and learning memory processes. Prerequisite: DEP 5405.

DEP 6477 Psychology of Social Processes in Aging (3). An intensive analysis of the background and recent developments in theoretical models of social development, personality processes, and social processes in the older adult. Prerequisite: DEP 5405.

DEP 6645 Cognitive and Language (3). Course covers the acquisition of cognitive processes and language, and their interdependence. Theory and research focusing on innate vs. learned aspects are discussed. Prerequisite: Graduate standing or permission of instructor.

DEP 6936 Current Literature in the Psychology of Infancy, Childhood, and Adolescence (3). This seminar will present and evaluate current research articles in the major journals in infant, child, and adolescence psychology. Prerequisite: Second year graduate standing.

DEP 6937 Current Literature in the Psychology of Adulthood and Aging (3). This seminar will present and

evaluate current research articles in the major journals in the psychology of adulthood and aging. Prerequisite: Second year graduate standing.

DEP 6945 Life-span Developmental Psychology Practicum (3). This is an individually tailored program where students will work in an agency on a specific problem or project, culminating in a final written report. Prerequisite: Second year graduate standing.

DEP 7069 Seminar in Life-Span Cognitive Developmental (3). This graduate seminar will examine, through intensive reading and seminar discussion, the major theories, issues and empirical research on cognitive growth, change and decline from infancy through old age. Prerequisites: Two courses in Developmental Psychology (any level).

DEP 7096 Seminar in Psychology of Life-Span Social Development (3). This course includes a consideration of general issues and discussion of the application of life-span models to selected topics development. Prerequisite: Graduate standing or permission of instructor.

EAB 5098 Proseminar in the Experimental Analysis of Behavior (3). An advanced survey of the principles of respondent and operant conditioning and the bases of action in both social and non-social settings. Prerequisites: EAB 3002, EAB 4034, or equivalents.

EAB 5655 Advanced Methods of Behavior Change (3). An intensive study of selected methods of modifying human behavior, emphasizing the applications of the principles of respondent and operant conditioning, as well as those derived from modern social learning theories. Practice and role playing opportunities are provided in behavior therapy, relaxation therapy, behavior modification, biofeedback or similar behavioral approaches. Prerequisites: EAB 4794, CLP 4374, CYP 4144; enrollment in an authorized program; equivalent background; or permission of instructor.

EAB 5797 Single-Case Research Methods (3). Intensive study of designs, strategies, and methods of single-case behavioral research. Prerequisites: Graduate standing or permission of instructor.

EAB 6707 Developmental Behavior Analysis (3). A survey of the applica-

tion of the principles, methods, and applications of experimental behavior analysis to various life-span segments and developmental themes. Prerequisites: Proseminar in Behavioral Analysis or an undergraduate EAB course (EAB 3002, EAB 4034, or EAB 4794).

EDP 6935 Special Topics in Educational Psychology (VAR). An intensive analysis of a particular topic in educational psychology. Students must have topics approved by the instructor prior to registration. Open only to advanced and graduate students in the College of Education.

EXP 5099 Proseminar in Experimental Psychology (3). Provides a comprehensive review of current research and theory in areas such as learning, memory, cognition, sensation, and perception. Prerequisite: Graduate standing or permission of instructor.

EXP 5406 Theories of Learning (3). The major theoretical systems of learning are covered, with the intent of determining how well each accounts for the phenomena of learning. Emphasis is placed on exploring the controversial issues raised by extant theories, and the experimental resolution of these theoretical controversies. The impact of theory on current thinking about learning is considered.

EXP 5508 Applied Cognitive Psychology (3). Covers the basic theories of cognitive psychology perception, attention, memory, learning, knowledge, with emphasis on application to real-world problems. Prerequisite: Graduate Standing.

EXP 5524 Cognitive Neuroscience (3). Investigation of the relation between mind and brain. Discuss literature from both patient studies and from the growing research in neuroimaging. Prerequisite: Graduate standing.

EXP 5527 Memory and Consciousness (3). The relation of memory and consciousness is explored with emphasis on issues of current research and theoretical work from both a cognitive and a neuropsychological perspective. Prerequisite: Graduate standing.

EXP 7747 Practicum in Causal Modeling (3). Introduction to linear structural relations models, emphasizing logical and practical problems in inferring causation for experimental and correlational research designs.

INP 5095 Proseminar in Industrial Psychology (3). Provides coverage of industrial and personnel psychology topics such as job analysis, personnel recruitment and selection, legal aspects of employment, performance appraisal, and training design and evaluation. Prerequisites: Acceptance to Master's or Ph.D. program in Psychology.

INP 5136 Psychology of Legal Consultation (3). Practice in basic non-clinical areas in which psychologists assist attorneys, including jury selection, surveys, and simulations. Prerequisite: SOP 6098 or equivalent.

INP 6216 Personnel Selection (3). Characteristics of Personnel Selection systems used in organizations. Validity generalization, utility, applicant reactions, and legal cases pertaining to employee selection. Prerequisites: Proseminar in I/O and graduate level statistics course.

INP 6235 Applied Psychology of Training and Development (3). In-depth study of principles of behavior and attitude change in organizations. Topics include organization analysis, program design and implementation, and evaluation of results. Prerequisites: Acceptance to M.S. or Ph.D. program in Psychology and SOP 5616.

INP 6940 Strategies and Methods of Applied Psychological Research (3). A practicum course in the psychological research strategies and the application of computers in the analyses of psychological data.

LIN 5701 Psychology of Language (3). An overview of the psychology of language and the psychological 'reality' of linguistic structure. Behavioristic vs. cognitive views of psycholinguistics are examined. Consideration is given to the biological bases of language and thought, language acquisition, and language pathology.

PCO 6206 Principles & Practices of Counseling & Psychotherapy (3). Examination of the principles & practices of counseling and psychotherapy derived chiefly from cognitive behavioral psychology. Prerequisite: Graduate standing.

PSB 6247 Biological Bases of Behavior (3). Advanced survey of biological bases of behavior. Topics include neuroanatomy, functional organization and electrochemical processes of the nervous system, and neural bases of learning and

memory. Prerequisites: Graduate standing or permission of instructor.

PSY 5206C Fundamentals of Design of Experiments (3). CRD and RCB designs. Latin square designs. Factorial, nested and nested-factorial experiments. Fixed, random and mixed models. Split-plot designs. Covariance analysis. Prerequisites: STA 3122 and 3123, or their equivalents.

PSY 5216 Proseminar: History and Systems of Psychology (3). An examination of the historical foundations of modern psychology and survey of current systems and schools of psychology. Prerequisites: Graduate standing or permission of instructor.

PSY 5246C Multivariate Analysis in Applied Psychological Research (3). Covers basic techniques of multivariate analysis, emphasizing the rationale and applications to psychological research. Includes multiple regression, Hotelling's T², MANOVA, principle component analysis, and factor analysis. Prerequisite: STA 3123 or equivalent; linear algebra recommended.

PSY 5605 Proseminar: History and Systems of Psychology (3). An examination of the historical foundations of modern psychology and survey of current systems and schools of psychology. Prerequisite: Graduate standing or permission of instructor.

PSY 5908 Directed Individual Study (VAR). Under the supervision of an instructor in the graduate degree program, the graduate student delves individually into a topic of mutual interest which requires intensive and profound analysis and which is not available in a formal offering. May be repeated once. Prerequisite: Permission of instructor.

PSY 5918 Supervised Research (VAR). Research apprenticeship under the direction of a research professor or a thesis advisor. Prerequisite: Full graduate admission.

PSY 5939 Special Topics in Psychology (VAR). Special topics will be announced in advance.

PSY 6956 Psychology Field Experience (VAR). Placement of students in applied settings for the purpose of developing community-based experience in the application of theoretical and methodological approaches. Prerequisite: Graduate standing.

PSY 6971 Master's Thesis in Psychology (3-6). Supervised research on an original research project submitted in partial fulfillment of Master's degree requirement.

PSY 7940 Supervised Teaching in Psychology (1). Supervised teaching under the guidance of faculty advisor. May be repeated only three times. Prerequisite: Doctoral graduate study.

PSY 7980 Dissertation Research in Psychology (3-12). Supervised research on an original research project submitted in partial fulfillment of doctoral degree requirements. Prerequisite: Admission to candidacy.

SOP 5058 Proseminar in Social Psychology (3). An in-depth examination of the role of social psychology in the social sciences and the major substantive problems as they relate to contemporary societal issues. Minimum Prerequisite: An introductory course in social psychology or its equivalent.

SOP 5316 Theories and Methods of Cross-Cultural Research (3). An intensive analysis of contemporary theories and methods of cross-cultural research in psychology including topics such as: culture as a research treatment, differential incidence of personality traits, the use of ethnographies, 'etic' vs. 'emic' distinction. Prerequisite: Graduate standing or permission of instructor.

SOP 5616 Social Psychology of Organizations (3). The application of concepts and theories from social psychology and sociology to the organizational setting. Emphasis would be on role theory, value formation and the operation of norms, including their development and enforcement. Formal and informal organization structure, power and authority concepts, and leadership theories will be covered. Communication processes and networks and their effects on task accomplishment and satisfaction will be included.

SOP 6098 Proseminar in Legal Psychology (3). The application of psychological research methods and psychological knowledge to contemporary issues in criminal and civil litigations. Prerequisite: Graduate Standing.

Religious Studies

Nathan Katz, Professor and Chairperson

Paul Draper, Associate Professor

Christine Gudorf, Professor

Steven Heine, Professor

James Huchingson, Associate Professor

Erik Larson, Assistant Professor

Lesley Northup, Assistant Professor and Graduate Program Director

Terry E. Rey, Assistant Professor

Theodore Weinberger, Assistant Professor

Affiliated Faculty

Thomas A. Breslin

Bongkil Chung

Daniel A. Cohen

Mitchell B. Hart

Marilyn Hoder-Salmon

Rositta Kenigsberg

David L. Lee

Felice Lifshitz

Mohiaddin Messbahl

Joseph F. Patrouch

Felix Pomeranz

Meri-Jane Ruchelson

Dorothy Patricia Wallace

Master of Arts in Religious Studies

FIU's Master of Arts in Religious Studies is designed to give students maximum flexibility in pursuing their research interests, while providing a firm foundation in both the general academic study of religion and the student's area of specialization.

The M.A. is a 36-credit hour program: 6 hours of core seminars, 12 hours of 'track' courses, 12 hours of electives, and 6 hours of thesis work.

Requirements for Admission

Application to the Master of Arts program in Religious Studies is made through FIU's Office of Admissions. The minimum requirements for admission include:

1. A baccalaureate degree from an accredited college or university;
2. Score of 1000 on the Graduate Record Examination (GRE) or an undergraduate (or graduate school) GPA of 3.0
3. Foreign students whose native language is not English must take the TOEFL (Test of English as a Foreign Language) and obtain a score of at least 550.
4. Two letters of reference from former instructors or others who are

able to evaluate the applicant's potential for graduate study.

5. Substantial writing sample to the Department.

Applications for admission are available from the FIU Office of Graduate Admissions and are evaluated by the Departmental Graduate Studies Committee.

Degree Requirements

1 Two core seminars. The first, the 'Seminar on Sacred Texts,' will be offered every fall. The second core seminar, 'Modern Analysis of Religion,' will be offered every spring.

2. A track of four related courses chosen in consultation with the Graduate Program Director and the Thesis Director.

3. 12 hours of elective graduate seminars, courses, and independent study, selected in consultation with the Graduate Director and Thesis Director.

4. A thesis or research project. Students may take either six hours of thesis advisement or a three credit research seminar with three credits of thesis advisement.

Course Descriptions

Definition of Prefixes

GRE-Ancient Greek; REL-Religion; PHI-Philosophy.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

REL 5023 Religious Ritual (3). Examines the critical relationship of ritual, religious practice and belief, and culture, while introducing the principles and methods of both ritual studies and liturgics. Prerequisite: Graduate standing.

REL 5025 Myth and Religion (3). Investigates the role, function, and meaning of myth in religious experience and practice through an examination of specific myths, mythic patterns, and critical theories.

REL 5130 North American Religion (3). Historical examination of religious groups and influences in North America, focusing on their contributions and cultural impact. Prerequisites: Graduate standing or permission of instructor.

REL 5131 Sects, Cults, and New Religions (3). Explores and critically analyzes the multiplicity of new American religious movements and the unique combination of factors

that has encouraged them. Prerequisite: Graduate standing or permission of instructor REL 5145.

REL 5145 Women and Religion (3). Examines the influence of religion on social construction of gender and the definition of woman's nature and role, with a focus on Western developments. Prerequisite: Graduate standing.

REL 5160 Science and Religion (3). Surveys the interaction between science and religion from conflict models to integration; special attention to specific natural sciences including cosmology and biology. Prerequisite: Graduate standing.

REL 5181 Religions and Ethics (3). Investigation of methods, resources for ethics in world religions, and some examples of issues. Prerequisite: Permission of instructor.

REL 5208 Studies of the Dead Sea Scrolls (3). Overview of the Dead Sea Scrolls; explores the new techniques being used in their study.

REL 5211 Bible I: The Hebrew Scriptures (3). Extensive reading in the Hebrew Scriptures; how the various texts of the Hebrew Scriptures came to be written, and how they can be interpreted - both within the context of faith communities and within the cultural contexts out of which the texts were written.

REL 5240 Bible II: The New Testament (3). History, theology, and interpretation methods of the New Testament. Prerequisite: Graduate standing.

REL 5331 Religions of India (3). Topics include: religion in prehistoric and ancient India, classical Hindu texts and schismatic movements, medieval theism, the acculturation of extrinsic religions, Hindu-Muslim-Sikh syncretism, and the modern period. Prerequisite: Graduate standing.

REL 5461 Religion and Philosophy (3). Examines the use of philosophical reasoning to justify religious belief or its rejection. Such topics as natural theology, atheism and fideism will be examined. Prerequisite: Graduate standing.

REL 5208 Studies of the Dead Sea Scrolls (3). Overview of the Dead Sea Scrolls; explores the new techniques being used in their study.

REL 5501 History of Christianity I: 100-1400 (3). Christianity from its origins to the Middle Ages. Doctrinal and

organizational development of the church and characteristic aspects of its spiritual life.

REL 5502 History of Christianity II: 1400-Present (3). Survey of movements, reforms, divisions, and major ideas within institutional Christianity, 1400 to present.

REL 5515 History of Early Christianity (3). Origin and growth of Christianity from the first to the fifth century, and the adaptation of its message to the Greco-Roman world. Prerequisites: Graduate standing or permission of instructor.

REL 5565 Modern Catholicism (3). Theology and liturgical practice in the Roman Catholic Church from Trent (16th c) to the present, with primary and secondary sources. Prerequisite: Graduate standing.

REL 5600 Studies in Judaism (3). Historical overview of Jewish belief and practice, with special consideration of Jewish ritual life. Prerequisites: Graduate standing or permission of instructor.

REL 5606 Rabbinic Judaism (3). The theology and ideologies of the 1700-year period in the history of Judaism known as Rabbinic Judaism.

REL 5613 Modernization of Judaism (3). Explores the ways in which religious beliefs and traditional concepts of Jewish self identity have changed as a result of emancipation and the participation of Jews in the modern Western world. Prerequisite: Bachelor's degree.

REL 5614 Ancient Judaism (3). The history, literature and characteristic institutions of Judaism from the Persian period to Amoraic times. Attention given to developments in the land of Israel and the diaspora. Prerequisite: Graduate standing.

REL 5615 Medieval Judaism (3). The works of major thinkers in Medieval Judaism, including Maimonides, Nahmanides, Halevi, Luzatto, and such topics as Jewish mysticism (Kabalah) and Hasidism.

REL 6013 Modern Analysis of Religion: Classic Texts in Religious Studies (3). Critical reflection upon the nature and function of religion, as found in classics of the field. Prerequisite: Graduate standing.

REL 6322 Seminar in Western Religions (3). Similarities and differences in the three Western monotheistic religions of Judaism, Christianity and Is-

lam during their historical development.

REL 6442 Religion in the Contemporary World (3). Society and religion in processes of secularization and pluralism. Attention to religious interpretations of socio-cultural processes. Prerequisite: Graduate standing.

REL 6935 Seminar in Sacred Texts (3). Sacred texts from several religions with a common theme. Problems of interpretation are a central concern. Prerequisite: Graduate standing.

REL 6940 Teaching Religious Studies (3). Assist the instructor in an introductory course and attend seminar meetings. Topics: 'faith' vs 'objectivity' in the classroom; student diversity; religious studies as a profession; designing an introductory course. Prerequisite: Graduate standing.

REL 6971 Thesis (1-6). For students working on the thesis for the M.A. in Religious Studies. Prerequisites: Graduate standing and permission of instructor.

Sociology and Anthropology

Stephen M. Fjellman, *Professor and Chairperson*

G. Janice Allen, *Assistant Professor*

Jerald B. Brown, *Associate Professor*

Janet M. Chernela, *Associate Professor*

Chris Girard, *Associate Professor and Director, Comparative Sociology, Graduate Program*

Hugh Gladwin, *Associate Professor and Director, Institute for Public Opinion Research*

Guillermo J. Grenier, *Associate Professor and Director, Center for Labor Research*

Antonio Jorge, *Professor*

A. Douglas Kincaid, *Associate Professor and Associate Director, LACC*

Lilly M. Langer, *Associate Professor*

Abraham D. Lavender, *Associate Professor*

Barry B. Levine, *Professor*

Kathleen Logan, *Associate Professor*

Shearon A. Lowery, *Associate Professor*

Anthony P. Malngot, *Professor*

James A. Mau, *Professor and Provost*

Betty Heam Morrow, *Associate Professor*

William T. Osborne, *Associate Professor*

Walter Gillis Peacock, *Associate Professor and Program Director at the International Hurricane Center*

Lisandro Perez, *Associate Professor and Director, Cuban Research Institute*

Alex Stepick, *Professor and Director, Immigration and Ethnicity Institute*

Richard Tardanico, *Associate Professor*

William T. Vickers, *Professor*

Lois West, *Assistant Professor*

The Comparative Sociology Graduate Program at Florida International University provides a unique opportunity to integrate the traditional strengths of sociology and anthropology by combining theory and empirical research with qualitative methods. The Program's faculty is especially noted for studying ethnic minorities, international development, gender, human ecology, labor, migration, theory, medical sociology and anthropology, and the sociology of disasters.

The Comparative Sociology Program provides professional training in social science research and the-

ory for careers in higher education, government service, and the private sector. Requirements for the graduate program allow students to construct an individualized program that meets their specific interests. The graduate program is designed to facilitate the process of obtaining a doctorate in Comparative Sociology. Students may decide to obtain only a M.A. while working toward their Ph.D.

Admission Requirements

Each applicant to the Graduate Program in Comparative Sociology must complete a graduate application form and arrange to send transcripts of all prior college (undergraduate and graduate) work and official reports of the Graduate Records Exam (GRE) and TOEFL (if applicable) to the FIU's Office of Admissions. Each applicant should also send a separate letter of application to the director of the Comparative Sociology Graduate Program, along with copies of the above material. The letter of application should include a statement expressing the applicant's academic and professional objectives. Applicants are strongly encouraged to include examples of academic or other relevant professional work that may support their application. Applicants must request three letters of recommendation from individuals able to comment on their academic ability. The letters of recommendation should be sent directly to the Director of the Comparative Sociology Graduate Program.

The application file must be complete before the Comparative Sociology Graduate Program Committee will consider the applicant for admission. The deadline for receipt of application—including all supporting materials and letters of recommendation—is February 15th. To be admitted into the Comparative Sociology Graduate Program a student must meet the University's graduate admission requirements which can be found in Florida International University's Graduate Catalog and the following minimum standards:

1. Applicants must have a baccalaureate degree from an accredited college or university. Students pursuing a Ph.D. and who do not have a Masters in Anthropology, Sociology, Comparative Sociology, or a closely related field which includes a written thesis must obtain

the Masters in Comparative Sociology at FIU on their way to completing the requirements of the Ph.D.

2. Applicants must have an undergraduate grade point average (GPA) of 3.0 or higher or a combined score of 1000 or higher on the verbal and quantitative sections of the Graduate Record Examination (GRE). Applicants must submit both grade transcripts and GRE scores for consideration. The student must also have a GPA of 3.5 on any previous graduate work.

3. Applicants should request that three letters of recommendation from individuals able to judge a student's academic potential be sent directly to the Director of the Comparative Sociology Graduate Program, Department of Sociology and Anthropology, Florida International University, Miami, FL 33199.

4. Applicants are encouraged to submit examples of written work and other supporting materials.

5. Applicants whose native language is not English must take the TOEFL (Test of English as a Foreign Language) and obtain a score of 500 or higher.

While a baccalaureate major in sociology or anthropology is helpful, it is not required for admission to the program. However, newly admitted graduate students who have no prior course work in sociology, anthropology, or statistics may be required to take one or more undergraduate courses as prerequisites for graduate-level courses. This decision is based on the evaluation of the student's undergraduate record by the Graduate Program Committee.

Financial Aid

Each academic year a limited number of graduate students are hired as teaching assistants. Teaching assistantships are allocated on a competitive basis and typically pay a substantial portion of tuition expenses and provide a stipend. To be considered for an assistantship the applicant must make such a request in writing to the Graduate Program Director. The awarding of teaching assistantships will be made by the Graduate Program Committee. Students receiving an assistantship are required to perform approximately 20 hours of teaching related duties per week and are re-

quired to participate in a one hour seminar related to teaching.

The M.A. Degree Requirements

The M.A. in Comparative Sociology is designed to provide the student with a strong foundation in theory and research skills. The M.A. in Comparative Sociology requires a total of 36 semester hours of credits, including 15 credits in core courses, 15 credits in electives, and a master's thesis based upon the student's research (including 6 credits of enrollment in Thesis hours). A maximum of six credits of graduate course work may be transferred from other institutions, subject to the approval of the Graduate Committee.

Required Courses (36):

SYA 6125	Classical Social Theories	3
SYA 6126	Contemporary Social Theories	3
SYA 6305	Research Methods I	3
SYA 6306	Research Methods II	3
SYA 6925	Graduate Colloquium in Comparative Sociology (1 credit course taken three times)	3
Four electives in Sociology and Anthropology (must be at the 5000-level or higher)		12
One elective in another department (must be numbered 5000 or above and be approved by the graduate advisor)		3
SYA 6975	Thesis	6

Graduation Requirements

To remain in good standing and to qualify for graduation, students must maintain a graduate GPA of 3.0 or higher. All M.A. course requirements must be met and a thesis must be completed and accepted after defending before their Thesis Committee. All requirements for the M.A. in Comparative Sociology, including the successful defense of the thesis, must be completed within six years of enrollment in the graduate program.

The Ph.D. Degree Requirements

The Ph.D. program in Comparative Sociology incorporates and builds on the M.A. program. The Ph.D. program consists of 90 semester hours of course work that includes the 36 hours necessary to obtain the M.A. degree in comparative sociology at FIU. The 90 hours of course work are divided into three major areas: core courses, substantive area courses, and specialty/elective courses. The

remaining course work will be made up of thesis/dissertation hours. In addition to course work, students are required to meet successfully the following: a thesis requirement; a written general examination; a post-thesis review, write and defend a dissertation proposal, and write and defend a dissertation.

Thesis Requirement

As part of the Doctoral Program in Comparative Sociology, students are expected to complete the requirements of a Masters Degree in Comparative Sociology, including the writing and defense of a thesis, and the completion of the post-thesis review process. The process of writing and defending a thesis is an integral and essential part of the Ph.D. program. Students who have obtained a Masters and written a thesis in Anthropology, Sociology, Comparative Sociology, or related field may petition the Graduate Program Committee for exemption from the thesis requirement. After meeting the thesis requirement and completing masters related course work, a student must undergo a Post-Thesis Review and be approved to continue in the Ph.D. program.

Course Work

The Ph.D. curriculum in Comparative Sociology consists of a total of 90 semester hours. In addition to a minimum of 30 thesis and dissertation hours, students must successfully complete 60 hours of course work divided into three areas: Core Courses (21 hours); Substantive Area Courses (12 hours); and Specialty/Elective Courses (27 hours).

Core Courses

The foundation of the core curriculum includes five required courses: SYA 6125 (Classical Social Theories), SYA 6126 (Contemporary Social Theories), ANT 5496 (Social Research and Analysis), SYA 6305 (Research Methods I), and SYA 6306 (Research Methods II). These courses are designed to provide a foundation in general theory and methods. The methods courses will provide the student with a survey of qualitative and quantitative methods including computer-based statistical analysis. All students are expected to become thoroughly familiar with the use of computers for work in comparative sociology.

In addition, students are required to complete two additional

core courses, one in methods and the other in theory, which are designed to provide them with an understanding of more advanced theory and methods, while meeting individual professional goals. Students may select the courses most consistent with their goals. However, they are encouraged to seek the advice of the Graduate Director and their advisor when making this decision.

Substantive Area Courses

Students will choose two substantive areas, from among those offered by the department. Each student will be required to take a minimum of two courses within each of their chosen areas. Current areas reflect the substantive specialties in which the faculty of Comparative Sociology have particular expertise: Cultural Analysis; Development and Social Change; Gender/Family; Medical; and Ethnicity, Race, and Migration. The required load of two courses in each substantive area is designed to provide added breadth to students' general knowledge.

Specialty/Elective Courses

In order to facilitate the creation of an individually tailored area of specialty, students may select 27 hours of graduate course work at Florida International University as specialty/elective courses. The specialty area course work should be developed by students with guidance from their major professor and research committee. At least two—but no more than four—elective courses must be from outside the department.

Ph.D. General Examination

After successfully completing the Post-Thesis Review and subsequent core and substantive course work, each student will take a written Ph.D. General Examination. This examination will be conducted in accordance with the FIU Graduate Policies and Procedures Manual and the Department's General Examination guidelines. The General Examination will include questions in four areas: theory, methods, and the two substantive areas selected by the student.

Dissertation Proposal and Defense

After passing the General Examination, students will develop a dissertation proposal. Upon completing the proposal and elective/specialty course work, the student must orally

defend the dissertation proposal before their Research Committee. The Proposal defense will consist of a comprehensive oral defense of the dissertation proposal and relevant literature as determined by the student's research committee. The proposal defense serves as the candidacy examination for the Comparative Sociology Graduate Program. A copy of the approved proposal must be filed with the Dean of Graduate Studies at least one full semester prior to defense of the dissertation. The student will generally defend the proposal during the semester that required course work is completed. Upon passing the Dissertation defense, the student is admitted to candidacy status.

The Dissertation Defense

After successfully defending the dissertation proposal, students will conduct research and complete their dissertations. Upon completion of their dissertation and authorization of the research committee, the student will then defend their dissertations before their research committee.

Course Descriptions

Definition of Prefixes

ANT-Anthropology; SYA-Sociological Analysis; SYD-Sociology of Demography and Area Studies; SYG-Sociology, General; SYO-Social Organization; SYP-Social Processes.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

ANT 5318 American Culture and Society (3). Anthropological analysis of the cultures and subcultures of the United States, focusing on the social, ethnic, and regional organizations and their corresponding value and symbolic systems. Prerequisite: Graduate standing or permission of instructor. (F)

ANT 5496 Social Research and Analysis (3). A graduate overview of the scientific methods used in intercultural studies. Includes the philosophical basis of science, research design, and hypothesis testing using both secondary and original data. Students will conduct a research project in this course. Prerequisite: Graduate status or permission of the instructor. (F)

ANT 5548 Ecological Anthropology (3). Theories of human adaptation, including environmental determinism, possibilism, cultural ecology,

materialism, and evolutionary ecology. Credit for both ANT 3403 and ANT 5548 will not be granted. Prerequisite: Graduate standing or permission of instructor. (SS)

ANT 5908 Directed Individual Study (VAR). Supervised readings and/or field research and training. Prerequisite: Permission of instructor. (F,S,SS)

ANT 5915 Directed Field Research (VAR). Permission of instructor required.

ANT 6302 Gender Identity in Comparative Perspective (3). Comparative examination of cultural and socio-economic factors defining gender identities and relations in western and non-western societies. Includes selected cross-cultural case studies. Prerequisites: Graduate Standing or permission of instructor. (S)

ANT 6303 Comparative Feminisms (3). Course examines feminisms and feminist movements in a global context. Taking several geocultural areas as examples, the course analyzes the discourse of cultures, feminisms, and feminist movements. Prerequisites: One graduate level course on gender or permission of the instructor. (S)

ANT 6319 The African Diaspora: Anthropological Perspectives (3). History and cultures of Africans outside of Africa, with a special emphasis on the African experience in the Americas. Topics covered include slavery, class, gender, ethnicity, and religion. Prerequisite: Graduate standing.

ANT 6469 Graduate Medical Anthropology (3). Concepts and methods in the field of medical anthropology. Importance of culture in governing the type and frequency of disease in a population, the way people explain and treat disease, and responses to the delivery of modern medicine. Prerequisite: Graduate standing. (S)

ANT 6497 Qualitative Research Methods (3). Qualitative research methods in anthropology and sociology. Includes participant-observation, field work, key informants and in-depth interviewing, visual techniques, ethical issues, and reflexivity. (F)

ANT 6931 Seminar on Latin America (3). Analysis of Latin American cultures and classes using case studies. Students read a series of anthropological or sociological works and dis-

cuss them in a seminar format. Prerequisite: Graduate standing or permission of instructor. (F)

ANT 6932 Seminar in Human Ecology (3). Analysis of human ecology using case studies. Students read a series of works on human adaptations and discuss them in a seminar format. Prerequisite: ANT 3403 or ANT 6548 or equivalent.

SYA 5135 Sociology of Knowledge (3). The study of the theoretical basis of knowledge and the inter-relatedness of knowledge and social factors, particularly as knowledge relates to institutional forms of behavior. (F)

SYA 5909 Directed Individual Study (VAR). Supervised readings and/or field research and training. Prerequisite: Permission of instructor. (F,S,SS)

SYA 5941 Directed Field Research (VAR). Permission of instructor required. (F,S,SS)

SYA 6125 Classical Social Theories (3). Classical social theories of the 19th and early 20th centuries. Includes the ideas of such thinkers as Spencer, Comte, Durkheim, Marx, Weber, Simmel, Pareto, Morgan, Tylor, and Boas. Prerequisite: Graduate standing or permission of instructor. (F)

SYA 6126 Contemporary Social Theories (3). The major currents and trends in contemporary sociological theory. Emphasis on the application of theories to specific research issues and practices. Prerequisite: Graduate standing or permission of instructor. (S)

SYA 6305 Research Methods I (3). The first in a two course sequence on research methods in comparative sociology. Includes research design and hypothesis testing, participant observation, interviewing techniques and survey research. Prerequisite: Graduate standing or permission of instructor. (F)

SYA 6306 Research Methods II (3). The second in a two-course sequence on research methods in comparative sociology. Includes the quantitative analysis of sociological research data, and the preparation of written reports and articles. Prerequisite: SYA 6305 and STA 3111 or STA 6166 or equivalent. (S)

SYA 6307 Research Methods III (3). Advanced qualitative analysis of sociological research stressing problems in measurement, data

collection and quality, and analysis techniques. Prerequisites: SYA 6306 and STA 3112 or STA 6167 or STA 5236 or permission of instructor.

SYA 6925 Graduate Colloquium in Comparative Sociology (1). Colloquiums presented by faculty, visiting scholars, and graduate students on topics of current research interest. Repeatable. Prerequisite: Graduate standing. (F,S)

SYA 6941 Internship in Applied Sociology (1-9). Practical application in a supervised setting outside of the classroom of knowledge acquired in the classroom. Hours may vary.

SYA 6943 South Florida Area Study (3). Current issues in South Florida studied through large-scale survey research conducted by class members. Provides experience in research techniques and the development and testing of theory. Prerequisites: SYD 6625 and SYA 6305. (S)

SYA 6975 Thesis (1-6). Registration for students working on the thesis for the M.A. in Comparative Sociology or the M.A. in International Studies. Prerequisite: All other course work for the M.A. in Comparative Sociology or International Studies. (F,S,SS)

SYA 7651 Foundations of Social Theory Construction (3). Seminar exams assumptions of social theory. Topics include objectivity in the social sciences, social science concepts and explanations, reductionism, and the bases of social theory construction. (S)

SYA 7930 Special Topic in Comparative Sociological Research (3). A detailed exploration into particular research methodologies, approaches and techniques relevant to Comparative Sociology. Topic will vary depending upon the instructor. Course may be repeated. Prerequisites: SYA 6305 and SYA 6306 or permission of instructor.

SYA 7940 Practicum Supervised Teaching (1-9). Practical application in a supervised setting of knowledge acquired in the classroom. Hours may vary. (F,S,SS)

SYA 7941 Field Research (1-9). Research projects or certain aspects of research in a field situation carried out by one or more students under the direction of a faculty member. Topics vary. Usually selected on an individual basis. Hours may vary. (F,S,SS)

SYA 7967 Preparation: Preliminary Doctoral Exam (1-9). Preparation for the preliminary doctoral exam under the direction of a faculty member. Hours may vary. (F,S)

SYA 7979 Advanced Research (1-9). Research projects or certain aspects of research carried out by one or more students under the direction of a faculty member. Topics vary; selected on an individual basis. Hours may vary. (F,S,SS)

SYA 7980 Dissertation (1-9). Hours taken by students to work on the dissertation under the supervision of a major professor and the doctoral committee. Hours may vary. (F,S)

SYD 5045 Demographic Analysis (3). The study of the processes that determine the size and composition of human populations. Emphasis on demographic transition theory and the antecedents and consequences of differential growth rates throughout the world. Prerequisite: Graduate standing or permission of the instructor.

SYD 6236 International Migration and Refugees (3). Comparative analysis of the causes, consequences, and policies concerning population movements across national borders. Includes review of various theories of labor migration. Students will conduct research on a migration or refugee topic. Prerequisite: Graduate standing or permission of instructor. (F)

SYD 6325 Seminar in the Comparative Sociology of Gender (3). The examination of women's and men's roles, status's, and life opportunities from a historical and comparative perspective. Current theoretical developments in the study of gender are emphasized. Prerequisite: Graduate standing or permission of instructor. (S)

SYD 6427 Seminar in Comparative Urban Issues (3). Current theoretical developments in the study of urbanism, including the evolution and growth of cities, spatial and social structures, migration, and the critical problems of social life in cities. Prerequisite: Graduate standing or permission of instructor. (F)

SYD 6615 Seminar in Comparative Analysis of Selected Regions (3). Comparative social analysis using studies from two or more world regions. Students read a series of works on issues such as bureaucracy, modernization, and development, and

discuss them in a seminar format. Prerequisite: Graduate standing or permission of instructor. (S)

SYD 6616 Comparative Stratification Seminar (3). Comparative analysis of causes and consequences of contemporary inequality in an international context. Emphasizes theoretical and methodological approaches to comparative case studies. Prerequisites: Graduate standing or permission of instructor. (S)

SYD 6625 South Florida Sociocultural Systems (3). The sociological and anthropological analysis of South Florida. Presents tools for regional study including demography, cultural ecology, and ethnic group-centered symbolic systems. Prerequisite: Graduate standing or permission of the instructor. (F)

SYD 6655 Seminar on Social Change in Asia (3). An examination of social change in contemporary Asia, including the relationships between states, the changing political economies, and the role of social movements and cultural institutions in change. Prerequisite: Graduate standing or permission of instructor.

SYD 6705 Comparative Analysis of Ethnicity and Race (3). Consideration of major theories of ethnicity and race and analysis of selected ethnic groups in various world regions. Includes the study of race and ethnic issues in Miami and the South Florida region. (S)

SYD 6715 Comparative Adolescent Cultures (3). Examines the adolescent cultures of different ethnic, class, and national groups from an anthropological and sociological perspective. The primary focus is on how adolescents construct their own social groups and what meaning they attribute to these constructions. Prerequisite: Graduate standing.

SYD 6811 Sociological Feminist Theory (3). Examines sociological theory as it deals with gender from a feminist perspective. Prerequisite: Graduate standing. (S)

SYD 7903 Directed Readings (1-9). Readings under the direction of a faculty member focusing on one of the tracks in the Ph.D. program. Hours may vary. (F,S,SS)

SYG 6932 Special Topics in Disaster Studies (3). Case studies of major disasters used to explore topics such as impact of gender, class, ethnicity, and age on vulnerability, response,

and outcome; effects of larger political and economic systems; and relationship to social change. May be repeated with change of topic.

SYG 7940 Field Research (1-9). Research projects or certain aspects of research in a field situation carried out by one or more students under the direction of a faculty member. Topics vary. Usually selected on an individual basis. Hours may vary. (F.S.SS)

SYO 6135 Advanced Comparative Family Systems (3). Comparative study of the family as an institution adapting to social and economic conditions. Cultural variation in marriage, parenthood and gender roles. Historical influences on the pluralistic American family. Credit for both SYO 4130 and SYO 6135 will not be granted. Prerequisite: Graduate standing or permission of the instructor. (F)

SYO 6305 Political Sociology (3). Examines social relations of power in groups, organizations, and national and global structures; also patterns of state formation, state-society relations, and sources of political change. Prerequisite: Graduate standing. (S)

SYO 6825 Graduate Medical Sociology (3). Examination of the social significance of health, illness, and medicine in the U.S. as compared to other societies. Includes disease type and distribution as well as a critique of health care professions, organizations, and policies. Prerequisite: Graduate standing. (F)

SYP 5447 Sociology of International Development (3). To introduce the basic concepts and questions of the field as applied to the international arena. To illustrate the common areas of social science analysis in dealing with questions of international development. (S)

SYP 6306 Comparative Social Movements (3). Comparative analysis of social movements and social change, including peasant movements, environmentalism, civil rights, feminism, and nationalism. Competing theories of social movements are examined. Prerequisite: Graduate standing or permission of the instructor. (F)

SYP 6907 Seminar in Comparative Social Change (3). The cross-cultural and comparative analysis of contemporary social change, including processes of social action such as terrorism, reformism, revolution, and the use of electoral systems and democratic processes.

Statistics

Jie Mi, Associate Professor and Chairperson

Carlos W. Brain, Associate Professor

Ling Chen, Associate Professor

Zhenmin Chen, Assistant Professor

Gauri L. Ghal, Associate Professor

Sneh Gulati, Associate Professor

Ina Parks Howell, Lecturer

Laura Reisert, Instructor

Samuel S. Shapiro, Professor

Hassan Zahedi-Jasbi, Associate Professor

Jyoti N. Zalkikar, Associate Professor

The Department of Statistics does not presently offer a degree program at the graduate level but does however offer graduate courses. These courses are offered to supplement other graduate degree programs at the University.

Course Description

Definition of Prefixes

STA - Statistics. MAP - Mathematics/Applied.

MAP 5117 Mathematical and Statistical Modeling (3). Study of ecological, probabilistic, and various statistical models. Prerequisites: MAC 2313, COP 2210 or CGS 2420, MAS 3105; and STA 4322 or STA 3164 or STA 3033.

STA 5106 Intermediate Statistics I (3). Power, measures of assoc., measurement, ANOVA: one-way and factorial, between and within subjects expected mean squares, planned comparisons, a-priori contrasts, fixed, random, mixed models. This course may be of particular interest to behavioral sciences. Prerequisites: STA 3111 and graduate standing. (F)

STA 5107 Intermediate Statistics II (3). Correlation and regression both simple and multiple, general linear model, analysis of covariance, analysis of nominal data, analysis of categorical data. This course may be of particular interest to behavioral sciences. Prerequisite: Permission of Instructor. (S)

STA 5126/PSY 5206 Fundamentals of Design of Experiments (3). CRD and RCB designs. Latin square designs. Factorial, nested and nested-factorial experiments. Fixed, random and mixed models. Split-plot designs. Covariance analysis. Prerequisites: STA 3123 or STA 3112 or equivalent.

STA 5206 Design of Experiments I (3). Design and analysis of completely randomized, randomized block, Latin square, factorial, nested and related experiments. Multiple comparisons. Credit for both STA 4202 and STA 5206 will not be granted. Prerequisite: STA 4322 or STA 3164 or STA 3033 or (STA 3163 and STA 3321).

STA 5207 Topics in Design of Experiments (3). This applied course in design of experiments covers topics such as split-plot design, confounding, fractional replication, incomplete block designs, and response surface designs. Prerequisite: STA 5206.

STA 5236 Regression Analysis (3). Simple, multiple and polynomial regression, analysis of residuals, model building and other related topics. Credit for both STA 4234 and STA 5236 will not be granted. Prerequisites: STA 3164 or STA 3123 or STA 3112, or STA 6167.

STA 5446-STA 5447 Probability Theory I and II (3-3). This course is designed to acquaint the student with the basic fundamentals of probability theory. It reviews the basic foundations of probability theory, covering such topics as discrete probability spaces, random walk, Markov Chains (transition matrix and ergodic properties), strong laws of probability, convergence theorems, and law of iterated logarithm. Prerequisite: MAC 2313.

STA 5505 Nonparametric Methods (3). Distribution-free tests: sign, Mann-Whitney U, Wilcoxon signed rank, Kruskal-Wallis, Friedman, etc. Rank correlation, contingency tables and other related topics. Credit for both STA 4502 and STA 5505 will not be granted. Prerequisite: First course in statistics.

STA 5676 Reliability Engineering (3). The course material is designed to give the student a basic understanding of the statistical and mathematical techniques which are used in engineering reliability analysis. A review will be made of the basic fundamental statistical techniques required. Subjects covered include: distributions used in reliability (exponential, binomial, extreme value, etc.); tests of hypotheses of failure rates; prediction of component reliability; system reliability prediction; and reliability apportionment. Prerequisite: STA 4322.

STA 5800 Stochastic Processes for Engineers (3). Probability and condi-

tional probability distributions of a random variable, bivariate probability distributions, multiple random variables, stationary processes, Poisson and normal processes. Prerequisites: STA 3033, MAC 2313, MAP 3302.

STA 5826 Stochastic Processes (3). This course is intended to provide the student with the basic concepts of stochastic processes, and the use of such techniques in the analysis of systems. Subjects include: Markov Processes, queueing theory, renewal processes, birth and death processes, Poisson and Normal processes. Applications to system reliability analysis, behavioral science, and natural sciences will be stressed. Prerequisite: STA 5447.

STA 5906 Independent Study (VAR). Individual conferences, assigned reading, and reports on independent investigation.

STA 6166/STA 6167 Statistical Methods in Research I and II (3-3). For non-mathematical sciences graduate students. A non-calculus exposition of methods and applications of statistical techniques for the analysis of data. Statistical packages will be used. Prerequisite: Graduate standing. (F.S)

STA 6176 Biostatistics (3). Linear, multiple regression, correlation, analysis of variance, Nonparametric tests, Chisquare, clinical trials, mortality statistics and other statistical procedures applicable to medicine and epidemiology. Prerequisites: STA 3111 or STA 2122 or STA 6166.

STA 6246 Data Analysis I (3). Exploratory data analysis; testing of distributional assumptions; Chi-square tests, tests for means, variances, and proportions. Prerequisites: STA 3033, STA 4322, or STA 6327.

STA 6247 Data Analysis II (3). Analysis of variance, regression analysis. Analysis of covariance, quality control, correlation, empirical distributions. Prerequisites: STA 6246 and MAS 3105.

STA 6326 Mathematical Statistics I (3). An introduction to the theories underlying statistical analysis. Basic concepts of probability theory, combinatorial analysis, random variables, and expectation. Prerequisite: MAC 2313.

STA 6327 Mathematical Statistics II (3). Estimation of parameters, tests of hypotheses, regression, non-para-

metric methods, analysis of variance, and multivariate concepts. Prerequisite: STA 6326.

STA 6505 Analysis of Categorical Data (3). Analysis of contingency tables, measures of association, logit and loglinear models. Prerequisites: STA 6167 or STA 5107 or STA 5236.

STA 6807 Queueing and Statistical Models (3). Review of probability concepts, basic probability distributions, Poisson process, queueing models, statistical models. Prerequisites: Permission of Instructor, MAC 3312 and either STA 3033 or STA 3321.

STA 6940 Supervised Statistical Consulting (3). Formulation of statistical problems from client information, consulting session management, interpersonal aspects of consulting, problem solving techniques. Prerequisites: Permission of Instructor, STA 4102, STA 6247, and STA 6327.

STA 7707 Multivariate Methods I (3). Multivariate normal, Wishart and Hotelling's distributions. Inferences for one and two mean vectors. Profile analysis. One- and two-way MANOVA. Multivariate multiple regression. Prerequisite: STA 3123 or STA 3112. (F)

STA 7708 Multivariate Methods II (3). Principal components analysis. Factor analysis. Canonical correlation analysis. Discriminant analysis. Cluster analysis. Multidimensional scaling. Prerequisite: STA 7707. (S)

Visual Arts

Clive King, Professor and Chairperson
William Maguire, Professor
Ralph F. Buckley, Associate Professor
William Burke, Professor
James M. Couper III, Professor
Carol Damian, Associate Professor
Eduardo Del Valle, Associate Professor
Richard Duncan, Associate Professor
Mirta Gomez, Associate Professor
Nora Heimann, Assistant Professor
Ellen Jacobs, Professor
Kate Kretz, Assistant Professor
Juan Martinez, Associate Professor
Dahlla Morgan, Lecturer/Art Museum Director
Christine Tambllyn, Assistant Professor
Manuel Torres, Associate Professor
Barbara Watts, Associate Professor
Sandra Winters, Associate Professor

The Department of Visual Arts does not presently offer a degree program at the graduate level but does, however, offer graduate courses. These courses are offered to supplement other graduate degree programs at the University. 3,000 and 4,000 course prerequisites.

Course Descriptions

Definition of Prefixes

ARH-Art History; ART-Art; PGY-Photography.

ARH 5907 Directed Studies (1-6). A group of students, with the approval of the art faculty, may select a master teacher of theory, research or criticism in selected areas as film, painting, sculpture, architecture, crafts, art history, multi-media art, etc. Arrangements must be made at least a semester before course is offered. May be repeated.

ARH 5913 Research (1-6). Art history, criticism, and theory in areas not covered by the present program and which the student wishes to study. Prerequisite: Permission of Instructor. May be repeated.

ART 5125C Ceramics (3). The advanced student will explore all aspects of expression in clay and glaze. Students will be expected to be mostly self-directed. Prerequisite: ART 3111C, or permission of the instructor. May be repeated.

ART 5159C Jewelry and Metals (3). A study of basic metal techniques and strengthening of three-dimensional design concepts for the beginner. The advanced student will explore the more difficult technical aspects of areas such as hollow ware, enameling, casting, and stone setting. May be repeated.

ART 5185C Glassblowing (3). A basic course in off-hand glass blowing, concerned with preparing, forming, and finishing glass; understanding of glass as an art form; operation and maintenance of a glass studio. May be repeated.

ART 5340C Drawing (3). Advanced drawing for M.S. in Art Education students. May be repeated. Prerequisites: ART 4304C, or equivalent, or permission of instructor.

ART 5341C Figure Drawing (3). Advanced figure drawing for M.S. in Art Education students. May be repeated. Prerequisites: ART 4333C, or equivalent, or permission of instructor.

ART 5406C Printmaking (3). Advanced printmaking for M.S. in Art Education students. May be repeated. Prerequisites: ART 4404C, or equivalent or permission of instructor.

ART 5580C Painting (3). Advanced painting for M.S. in Art Education students. May be repeated. Prerequisites: ART 4513 or equivalent, or permission of instructor.

ART 5710C Figure Sculpture (3). To develop skills in representational structure and anatomy from the model and learn mold-making techniques. May be repeated.

ART 5730C Sculpture (3). Advanced sculpture for M.S. in Art Education students. May be repeated. Prerequisites: ART 4705C or equivalent, or permission of instructor.

ART 5907C Directed Study (VAR). A group of students, with the approval of the Visual Arts Department faculty, may select a master artist teacher and pursue a course of art study in selected areas such as graphic design, film, multi-media, environmental design, sound, etc. Arrangements must be made at least one semester before course is offered. May be repeated.

ART 5910C Research (1-6). Students may study or research an individual art project with an art faculty member. Complexity and amount of

work will determine the number of credit hours granted. May be repeated.

PGY 5116C Color Photography (3). Advanced color photography for MS in Art Education students. (See PGY 4113). Prerequisite: PGY 4113C.

PGY 5425C Photography (3). Advanced photography for M.S. in Art Education students. May be repeated. Prerequisite: PGY 4003C, or equivalent, or permission of instructor.

Certificate Programs

African-New World Studies Certificate Program

Carole Boyce Davies, Director
(English)

Coordinating Committee

Leke Adebo, (Philosophy)

G. Janice Allen, (Sociology/Anthropology)

Jean-Robert Cadely, Modern Languages

Chris Gray, (History)

Ivelaw Griffith, (Political Science)

Tometro Hopkins, (English)

Abe Lavender, (Sociology/Anthropology)

Linda Leek, (English)

Alex Lichtenstein, (History)

Ken Lipner, (Economics)

Leslie Neal, (Theatre/Dance)

Adele Newson, (English)

Joyce Shaw Peterson, (History)

William Reno, (Political Science)

Alex Stepick, III, (Sociology/Anthropology)

Clarence Taylor, (History)

S. Lee Woods, (Education)

The African-New World Studies Certificate Program seeks to provide graduate-level instruction in the diverse field of Africana Studies.

Specifically, the African-New World Studies Certificate Program seeks to:

1. Provide an excellent university education, while both challenging and stimulating students/participants to contribute to the development of their communities;
2. Generate new knowledge and research opportunities within the field of Africana Studies.
3. Serve the university's external community with special programming to meet educational needs;
4. Foster greater understanding of the global nature of African peoples.

General Requirements (18)

Two courses (six credit hours) from the following list:

AMH 5935	Topics In American History	3
HIS 5930	Special Topics	3
ANT 6319	The African Diaspora: Anthropological Perspectives	3
LIN 6937	Linguistics Seminar	3
LIT 5487	Texts and Culture	3

PHI 5934 Special Topics 3

Electives

The four remaining courses (12 credit hours) may be drawn from a variety of elective courses. The following courses represent examples of elective courses appropriate for the completion of the certificate program. Students should consult with advisors since new courses are frequently added, special topics courses sometimes concern African/diaspora topics, and some courses have prerequisites and enrollment stipulations.

College of Arts and Sciences

ECP 6605	Urban and Regional Analysis	3
ECP 7606	Urban and Regional Economics	3
ECS 6436	Economics of Caribbean Migration	3
ECS 7435	Economics of the Caribbean	3
INR 5087	Ethnicity and the Politics of Development	3
LIN 6572	Structure of a Non-Indo-European Language	3
POS 5932	Topics in Urban Politics	3
POS 6146	Seminar in Urban Politics	3
CYP 6766	The Psychology of Cross-Cultural Sensitization in a Multicultural Context	3
DEP 6145	Psychology of Culture and Childhood	3
DEP 6465	Psychology of Culture and Aging	3
SOP 5316	Theories and Methods of Cross-Cultural Research	3
SPN 5536	Afro-Cuban Culture	3
SPW 5515	Advanced Studies in Hispanic Folklore	3
ANT 6319	The African Diaspora: Anthropological Perspectives	3
SYA 6943	South Florida Area Study	3
SYD 6625	South Florida Sociocultural Systems	3
SYD 6427	Seminar in Comparative Urban Issues	3
SYD 6705	Comparative Analysis of Ethnicity and Race	3

College of Education

EDE 5267	Education of the Child in Urban Society	3
EDE 5941	Practicum I in Urban Education	3
EDE 5942	Practicum II in Urban Education	3
EDF 5851	Socio/Cultural Conflict in Educational Change	3
EDF 5880	Intercultural Education: National and International Perspectives	3
MHS 6428	Cross Cultural Counseling	3

Latin American and Caribbean Studies Certificate Program

Mark B. Rosenberg, *Director, Professor, Political Science*
Eduardo A. Gamarrá, *Graduate Program Director Political Science*

LACC's programs at Florida International University lie at the heart of the University's commitment to international studies. Over the last decade, LACC has become one of the strongest Latin American and Caribbean studies programs in the United States, joining a small cadre of nationally distinguished programs at major research universities.

LACC is an academic center and a think tank, promoting more than 200 area studies courses per year through its certificate programs and 16 participating departments. Through a multidisciplinary approach to Latin America and the Caribbean, LACC carries out a tri-fold institutional mission of rigorous instruction, cutting-edge research, and public education.

Associated faculty members are internationally recognized for their original research, particularly on Central America and the Caribbean. Their contributions are consistently published in peer review journals. Since 1979 the number of LACC faculty has increased by 300%. Another 50% increase is anticipated in the next decade.

The certificate program is designed to supplement the degree programs of full-time graduate students, and serve the interests of working professionals seeking a broader understanding of Latin American and Caribbean issues.

Students registered in the certificate program receive regular mail-

ings announcing course offerings, seminars, foreign study opportunities, and other special events. They also receive LACC News, a newsletter reporting on people and activities concerning Latin American and Caribbean affairs at FIU.

An important component of the Latin American and Caribbean studies program at FIU is the library. The Latin American and Caribbean holdings of the FIU library system has surpassed 35,000 volumes, excluding government documents. Regionally, the collection is strongest in works on Cuba and Central America, with substantial strength in Caribbean countries as well. LACC receives about 150 publications, mainly consisting of newsletters and research report series.

Students interested in the certificate program should contact the graduate student advisor at LACC. Call (305) 348-2894 for an appointment.

Certificate Requirements (15):

The certificate program requires a total of 15 hours of course work with a grade of "B" or higher. Courses should come from the certificate program listing below, or must otherwise be approved by the certificate program faculty advisor. Specific requirements follow:

1. Either: LAH 5935 Topics in Latin American History: Formation of Latin America, or LAH 5935 Topics in Latin American History: The National Period. This requirement may be waived for history majors or others who have taken an equivalent course. These students must choose an approved second course outside their major.

2. Nine hours in the student's major department, with a grade of "B" or higher. Three of these must be for independent study or thesis research on Latin America and/or the Caribbean.

3. Three hours outside the student's major.

4. Reading competence at the level of graduate research in Spanish, Portuguese, or French, demonstrated by a proficiency exam administered by the Department of Modern Languages.

The following courses fulfill certificate requirements. These courses should be understood as a partial list; students should consult with ad-

visors of the certificate program about the current course offerings.

Economics

- ECS 5027 Economic Development of Emerging Nations
- ECO 5709 World Economy
- ECS 7015 Development Economics: Theory
- ECS 7026 Development Economics: Planning and Policy
- ECS 7405 Economics of Latin America
- ECS 7435 Economics of the Caribbean
- ECS 7445 Economics of Central America

History

- LAH 5905 Readings in Latin American History
- LAH 6915 Research in Latin American History
- LAH 5935 Topics in Latin American History
- LAH 6906 Advanced Readings in Latin American History

International Relations

- INR 5087 Ethnicity and the Politics of Development
- GEO 5415 Topics in Social Geography*
- INR 5607 International Relations and Development
- INR 5935 Topics in International Relations*
- INR 6605 Contemporary International System
- INR 6056 Environment and Development

Modern Languages

- SPN 5525 Spanish American Culture
- SPW 5237 Traditional Spanish American Novel
- SPW 5286 Contemporary Spanish American Novel
- SPW 5358 Graduate Seminar: Borges
- SPW 5359 Poetry of Pablo Neruda
- SPW 5475 19th Century Latin American Literature
- SPW 5387 Women and Literature
- SPW 5575 Spanish American Modernism
- SPW 5756 Mexico in Poetry

Political Science

- CPO 5036 Politics of Development

- CPO 5935 Topics in Comparative Politics*

- CPO 5091 Seminar in Comparative Politics*

- CPO 6307 Seminar on South American Politics

- CPO 6376 Seminar in Central American Politics

- INR 6936 Seminar in Inter-American Politics

Sociology/Anthropology

- ANT 5548 Ecological Anthropology

- ANT 6931 Seminar on Latin America

- SYD 6325 Seminar in Comparative Sociology of Gender

- SYD 6705 Comparative Analysis of Race and Ethnicity

- SYP 6907 Seminar in Comparative Social Change

- SYP 5447 Sociology of International Development

- SYP 6306 Comparative Social Movements

- SYD 6236 International Migration and Refugees

- SYD 6427 Seminar in Comparative Urban Issues

*When course includes enough Latin American and Caribbean content to justify inclusion in certificate program. Student should obtain advanced written approval from advisor.

College of Arts and Sciences

Dean	Arthur W. Herriott
Associate Dean, Curriculum and Advisement	Fred Bouma
Associate Dean, College Relations	Gisela Casines
Associate Dean, Budget and Planning	Brian Cutler
Associate Dean, North Campus	Joyce Peterson
Associate Dean, Faculty and Graduate Studies	Mark Szuchman
Director, School of Computer Science	Michael Evangelist
Director, School of Music	Fredrick Kaufman

Chairpersons and Program

Directors:

Biological Sciences	Kelsey Downum
Chemistry	Kenneth Furton
Economics	Panagis Liosatos
English	Donald Watson
Environmental Studies	John Parker
Geology	Gautam Sen
History	N. David Cook
Humanities	Kenneth Rogerson
International Relations	Damian Fernandez
International Studies	Nicholas Onuf
Latin American and Caribbean Studies	Eduardo Gamarra
Liberal Studies	Janat Parker
Mathematics	Enrique Villamor
Modern Languages	Isabel Castellanos
Music	Fredrick Kaufman
Philosophy	Bruce Hauptli
Physics	Stephan Mintz
Political Science	John Stack, Jr.
Psychology	Scott Fraser
Religious Studies	Nathan Katz
Sociology and Anthropology	Stephen Fjellman
Statistics	Jie Mi
Theatre and Dance	Therold Todd

Visual Arts	Clive King
Women's Studies	Marilyn Hoder-Salmon

Faculty

Adeote, Leke, Ph.D. (University of California-Los Angeles), Assistant Professor, Philosophy
Ajitabh, Kaushal, Ph.D. (Massachusetts Institute of Technology), Assistant Professor, Mathematics
Akache, Walid, M.S. (University of Miami), Instructor, School of Computer Science
Aladro, Gerardo, Ph.D. (Pennsylvania State University), Associate Professor, Mathematics
Alien, G. Janice, Ph.D. (University of Florida), Assistant Professor, Sociology/Anthropology
Anbarci, Nejat, Ph.D. (The University of Iowa), Associate Professor, Economics
Antrim, Harry, Ph.D. (University of Florida), Professor, English
Apanius, Victor, Ph.D. (University of Pennsylvania), Assistant Professor, Biological Sciences
Arnold, St. George Tucker, Jr., Ph.D. (Stanford University), Associate Professor, English
Arvin-Rad, Hassan, Ph.D. (University of Pennsylvania), Assistant Professor, Economics
Atti, Paul C., Ph.D. (University of Texas-Austin), Assistant Professor, School of Computer Science
Augenblick, John, D.M.A. (University of Miami), Associate Professor, School of Music
Bahrack, Lorraine, Ph.D. (Cornell University), Associate Professor, Psychology
Baker, Joan L., Ph.D. (University of Washington), Assistant Professor, English
Baldor, Aurelio, M.A. (Florida International University), Instructor, Modern Languages
Barrett, Lynn, M.F.A. (University of North Carolina-Greensboro), Associate Professor, English
Barton, David, Ph.D. (University of Cambridge), Professor, School of Computer Science
Bazzi, Rida, Ph.D. (Georgia Institute of Technology), Assistant Professor, School of Computer Science
Becel, Pascale, Ph.D. (University of California-Davis), Assistant Professor, Modern Languages
Becker, David, Ph.D. (Massachusetts Institute of Technology), Assistant Professor, Chemistry

Beer, Michelle, Ph.D. (University of Pittsburgh), Associate Professor, Philosophy
Bekiranov, Daniella, Ph.D. (University of California-Santa Barbara), Assistant Professor, Mathematics
Bennett, Bradley C., Ph.D. (University of North Carolina-Chapel Hill), Assistant Professor, Biological Sciences and Environmental Studies
Berk, Lynn, Ph.D. (Purdue University), Professor, English
Berk, Toby, Ph.D. (Purdue University), Professor, School of Computer Science
Bhat, Mahadev, Ph.D. (University of Tennessee-Knoxville), Assistant Professor, Environmental Studies
Bigger, Charles, Ph.D. (Florida State University), Associate Professor, Biological Sciences
Blansett, Lisa, Ph.D. (University of North Carolina-Chapel Hill), Assistant Professor, English
Blum, Milton, Ph.D. (New York University), Professor Emeritus, Psychology
Boeglin, Werner, Ph.D. (University of Basle, Switzerland), Assistant Professor, Physics
Bone, Richard, Ph.D. (University of West Indies, Jamaica), Professor, Physics
Boodhoo, Ken, Ph.D. (University of the West Indies, Jamaica), Associate Professor, International Relations
Boyce Davies, Carole, Ph.D. (University of Ibadan, Nigeria), Professor, English and Director of African-New World Studies Program
Brain, Carlos W., Ph.D. (West Virginia University), Associate Professor, Statistics
Breslin, Thomas A., Ph.D. (University of Virginia), Associate Professor, International Relations, and Vice Provost
Brooke, Lee, B.S. (The Julliard School), Associate Professor, Theatre and Dance
Brown, Jerry, Ph.D. (Cornell University), Associate Professor, Sociology/Anthropology
Brown, Joann, M.A. (University of Miami), Instructor, Theatre and Dance
Buckley, Ralph, M.F.A. (Maryland Institute), Associate Professor, Visual Arts
Burke, William, M.F.A. (State University of New York at New Paltz), Professor, Visual Arts

- Butler, Allison, Ph.D.** (*University of Oregon*), Assistant Professor, Economics
- Cadely, Jean-Robert, Ph.D.** (*Université du Québec-Montreal*), Assistant Professor, Modern Languages
- Camayd-Freixas, Erik, Ph.D.** (*Harvard University*), Assistant Professor, Modern Languages
- Campbell, Gary, M.A.** (*University of Miami*), Assistant Professor, School of Music
- Carvajal, Manuel, Ph.D.** (*University of Florida*), Professor, Economics
- Casines, Gisela, Ph.D.** (*University of Florida*), Associate Professor, English and Associate Dean, College of Arts and Sciences
- Castellanos, Isabel, Ph.D.** (*Georgetown University*), Professor and Chairperson, Modern Languages
- Castells, Ricardo, Ph.D.** (*Duke University*), Assistant Professor, Modern Languages
- Chan, Ivan, B.M.** (*The Curtis Institute of Music*), The Miami String Quartet-in-Residence, School of Music
- Chanley, Virginia, Ph.D.** (*University of Minnesota*), Assistant Professor, Political Science
- Chatfield, David, Ph.D.** (*University of Minnesota*), Assistant Professor, Chemistry
- Chen, Chun-Fan, Ph.D.** (*University of Michigan*), Associate Professor, Biological Sciences
- Chen, Chungmin, Ph.D.** (*University of Maryland*), Assistant Professor, School of Computer Science
- Chen, Ling, Ph.D.** (*American University*), Associate Professor, Statistics
- Chen, Z. Sherman, Ph.D.** (*University of Texas-Dallas*), Assistant Professor, Statistics
- Chernela, Janet, Ph.D.** (*Columbia University*), Associate Professor, Sociology/Anthropology
- Childers, Daniel, Ph.D.** (*Louisiana State University*), Assistant Professor, Biological Sciences and Southeast Environmental Research Program
- Chiu, Wan-Ling, Ph.D.** (*Michigan State University*), Assistant Research Scientist, Biological Sciences
- Chung, Bongkil, Ph.D.** (*Michigan State University*), Associate Professor, Philosophy
- Church, Phillip, M.F.A.** (*University of California-Irvine*), Associate Professor, Theatre and Dance
- Clark, Alice, Ph.D.** (*University of Michigan*), Assistant Professor, Environmental Studies
- Clark, John, Ph.D.** (*University of Virginia*), Assistant Professor, International Relations
- Clem, Ralph, Ph.D.** (*Columbia University*), Professor, International Relations
- Clement, Bradford, Ph.D.** (*Columbia University*), Professor, Geology
- Cohen, Daniel, Ph.D.** (*Brandeis University*), Associate Professor, History
- Collins, Timothy, Ph.D.** (*Yale University*), Assistant Professor, Biological Sciences
- Condon, Keith, Ph.D.** (*University of Illinois-Chicago*), Assistant Professor, Biological Sciences
- Cook, N. David, Ph.D.** (*University of Texas*), Professor and Chairperson, History
- Capeland, Emily, Ph.D.** (*Fletcher School of Law and Diplomacy, Tufts University*), Assistant Professor, International Relations
- Correll, Helen, Ph.D.** (*Duke University*), Research Scientist, Biological Sciences
- Couper, James, M.A.** (*Florida State University*), Professor, Visual Arts
- Cox, Ronald W., Ph.D.** (*University of Wisconsin*), Associate Professor, Political Science
- Craumer, Peter, Ph.D.** (*Columbia University*), Assistant Professor, International Relations
- Crosby, James, Ph.D.** (*Yale University*), Professor Emeritus, Modern Languages
- Cuervo, Leon, Ph.D.** (*University of Maryland*), Professor, Biological Sciences
- Cutler, Brian, Ph.D.** (*University of Wisconsin-Madison*), Associate Professor, Psychology and Associate Dean, College of Arts and Sciences
- Damian, Carol Ph.D.** (*University of Miami*), Associate Professor, Visual Arts
- Darcl, Yesim, Ph.D.** (*University of Missouri*), Associate Professor, Physics
- Daruwala, Maneck, Ph.D.** (*University of Rochester*), Associate Professor, English
- Davidovic, Robert, Postgraduate Diploma in Violin** (*The Juilliard School*), Professor, School of Music
- de Alonso, Irma, Ph.D.** (*University of York, England*), Professor, Economics
- de la Cuesta, Leonel A., Ph.D.** (*The Johns Hopkins University*), Associate Professor, Modern Languages
- del Valle, Eduardo, M.F.A.** (*Brooklyn College, City University of New York*), Associate Professor, Visual Arts
- Delgado, Milagros, Ph.D.** (*University of Miami*), Lecturer, Chemistry
- Demos, Marian, Ph.D.** (*Harvard University*), Associate Professor, Humanities and Modern Languages
- Deng, Yi, Ph.D.** (*University of Pittsburgh*), Assistant Professor, School of Computer Science
- Deng, Yiwei, Ph.D.** (*Swiss Federal Institute*), Assistant Professor, Chemistry
- Detwiler, Bruce, J.D., Ph.D.** (*Cornell University*), Associate Professor, Political Science
- DiPasquale, Theresa M., Ph.D.** (*University of Virginia*), Associate Professor, English
- Donnelly, Maureen, Ph.D.** (*University of Miami*), Assistant Professor, Biological Sciences
- Downey, Timothy, M.S.** (*State University of New York-Albany*), Instructor, School of Computer Science
- Downum, Kelsey, Ph.D.** (*University of British Columbia*), Associate Professor and Chairperson, Biological Sciences
- Draper, Grenville, Ph.D.** (*University of the West Indies*), Professor, Geology
- Draper, Paul, Ph.D.** (*University of California-Irvine*), Associate Professor, Philosophy and Religious Studies
- Dufresne, John, M.F.A.** (*University of Arkansas*), Associate Professor, English
- Duncan, Richard, M.F.A.** (*Southern Illinois University*), Associate Professor, Visual Arts
- Dunn, Marvin, Ph.D.** (*University of Tennessee*), Associate Professor, Psychology
- Dunscorn, Richard, M.M.E.** (*Millikin University*), Professor, School of Music
- Dutta Gupta, Shamita, Ph.D.** (*Brown University*), Assistant Professor, Mathematics
- Edward, Julian, Ph.D.** (*Massachusetts Institute of Technology*), Assistant Professor, Mathematics
- Ege, Raimund, Ph.D.** (*Oregon Graduate Center*), Associate Professor, School of Computer Science
- Eihal, Jeffrey A., Ph.D.** (*State University of New York-Stony*

- Brook), Assistant Professor, Biological Sciences
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College of Business Administration

College of Business Administration

Mission Statement

The mission of the College of Business Administration at Florida International University is to:

- Provide quality undergraduate and graduate business education for an ethnically diverse student body within a large, urban, multi-campus, public institution.
- Contribute to relevant bodies of knowledge by encouraging and supporting faculty involvement in basic and applied research and instructional development.
- Provide professional services to the many constituents it serves.

The College strives to promote in its students the capacity for critical thinking within the context of professional ethics, integrity, and social responsibility. The College fosters in its students an entrepreneurial spirit, an understanding of appropriate technology, and a commitment to life-long learning within an evolving global environment.

To promote the advancement of knowledge in the field of business the College of Business Administration encourages and supports faculty research and other intellectual contributions. These activities include basic research, applied research, and instructional development.

The College strives to provide professional services to its many worldwide constituents with a special emphasis on the needs of the local region. State-of-the-art career enhancing programs are disseminated through the College's various centers to provide professionals with the capabilities to meet the challenges of the future.

Degree Programs

The College of Business Administration (CBA) offers academic programs leading to the graduate degrees of Master of Accounting (M.Acc.), Master of Business Administration (M.B.A.), Master of International Business (M.I.B.), Master of Science in Finance (M.S.F.), Master of Science in Taxation (M.S.T.), and Doctor of Philosophy in Business Administration (Ph.D.).

The College is organized into the School of Accounting and Departments of Decision Sciences and Information Systems, Finance,

Management and International Business, and Marketing and Business Environment.

Note: The programs, policies, requirements, and regulations listed in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements and regulations.

Executive Master of Business Administration

This is a special program charging tuition plus additional fees limited to a select number of students. The objective of this program is to provide an educational alternative, tailored to the needs of the working professional who wishes to obtain a Master of Business Administration in a concentrated time span. For information on the program call 348-1036.

Master's Degree Programs

All students taking graduate business courses must be admitted to a business graduate program or have prior approval from the appropriate graduate counselor.

The graduate programs of the College offer the student advanced professional education for managerial careers in business and government. At the Master's level, the degrees of Master of Accounting, Master of Business Administration, Master of International Business, Master of Science in Finance, and Master of Science in Taxation are offered.

The Master of Business Administration degree is designed to give students a general management education and to assist them in preparing for their chosen careers. More specialized preparation is available in the other programs.

Admission Requirements

To be eligible for admission to the graduate programs in the College, the applicant must:

1. Satisfactorily meet the general University requirements for admission to graduate programs.

2. Hold a Bachelor's degree from a regionally accredited college or university.

3. Show high promise of success in graduate studies as determined by the faculty. Admission to all the College graduate programs will be based upon a combination of the Graduate Management Admission Test (GMAT) and the upper-division grade point average.

4. A foreign student must obtain a minimum score of 500 on the TOEFL, or an equivalent score on a comparable examination. See General Admission requirements for Foreign Students (undergraduate and graduate) in the Admission section of the catalog.

5. Be in good standing with previous colleges or universities attended.

Application Procedures

A student planning to enroll in graduate studies in the College must complete the following steps and meet the stipulated requirements:

1. Submit a Graduate Application for admission to the Admissions Office. Application Forms will be mailed upon request. The admission process may require as long as two months after receipt of the application, depending upon the time involved in the receipt of transcripts and test scores.

2. Have a copy of the official transcripts of all previously earned college or university credits sent from the applicant's former institution(s) to the Admissions Office. (Copies submitted directly by applicants are not accepted for application purposes).

3. Submit scores on the Graduate Management Admissions Test (GMAT), administered nationally by the Educational Testing Service (Box 966, Princeton, New Jersey 08540). Registration forms will be mailed upon request.

Degree Requirements

To be eligible for a Master's degree, a student must:

1. Satisfy all University requirements for a master's degree.
2. Meet the requirements of an approved program of study. This program of study is developed by the student and his or her graduate

counselor and must be approved by the appropriate Department Chairperson.

3. (a) Complete a minimum of 36 semester hours (depending on program) of graduate level coursework, for the Master of Science in Finance.

(b) Complete a minimum 40 semester hours of graduate level coursework, for the Master of Business Administration or 39 semester hours for the Master of International Business.

(c) Complete a minimum of 30 semester hours of graduate level coursework for the Master of Accounting or the Master of Science in Taxation programs.

4. Earn a minimum average of 'B' (3.0) in all approved courses in the student's program of study.

No courses in which a grade below 'C' is earned may be counted toward the M.Acc., MBA, MIB, MSF, or MST degrees. However, all approved work taken as a graduate student will be counted in computing the grade point average, including courses graded 'D' or 'F', and any approved undergraduate courses taken while a graduate student.

Transfer Credit

Students may receive permission to transfer up to a maximum of six semester hours of graduate credit toward their degree program, provided that: (1) the courses were taken at the graduate level at an accredited college or university; (2) the courses were not introductory or 'survey' in nature; (3) grades of 'B' or higher were earned; (4) the courses are judged by the faculty advisor, the Department Chairperson, and the Dean to be relevant to the student's graduate program; (5) the credits were not used toward another degree; and (6) the credits were completed within six years immediately preceding the awarding of the degree. Credits are not transferable until the student has earned 15 semester hours in the CBA graduate program. Students wishing to transfer to the CBA must be in good standing at their previous school or college.

Readmission

An admitted degree-seeking student who has not completed any course at the University for three consecutive semesters or more (including Summer semester) must re-apply for readmission. If readmitted, the student must comply with the

University degree requirements in effect at the time of readmission.

Time Limit

All work applicable to the Master's degree, including transfer credit, must be completed within six years immediately preceding the awarding of the degree.

Change of Major

The graduate student who wishes to change his or her program major must submit a Graduate Change of Major request to the Admissions Office and meet the admission and program requirements in effect at the time of the change of major.

Master of Business Administration (MBA)

The objective of the MBA program is to develop a management generalist who has a breadth of knowledge and understanding of business and who is oriented toward pragmatic problem-solving. The courses leading to the MBA degree are designed to provide experience in the techniques and concepts of business administration. The program is characterized by its focus on academic excellence and its use of innovative approaches to enhance learning. The overall setting is a 'global' environment that nourishes a balanced mix of creativity, academic foundations, and interaction with today's real world business practices. Students may concentrate in a specific area by taking their elective courses in accounting, finance, human resources management, international business, management, management information systems, marketing, and organizational behavior.

The MBA program has two tracks:

1. A track of 40 hours for students who have an undergraduate degree in business from an AACSB accredited school awarded five years or less prior to acceptance in this program. This track consists of 28 hours of non-waivable core courses and 12 hours of approved electives which may be taken towards a concentration in one subject area. (Note: students are required to take BUL 6810, Legal Environment of Business, in addition to the four electives, if an upper-division legal environment of business course was not completed within five years prior to admission.)

2. A track of up to 61 hours for students who have a) a business undergraduate degree awarded more

than five years prior to acceptance into this program, b) a business undergraduate degree from a school not accredited by the AACSB, or c) a non-business undergraduate degree. This track consists of 21 hours of waiveable pre-core courses, 28 hours of non-waivable core courses, and 12 hours of approved electives which may be taken towards a concentration in one subject area.

Pre-Core Courses (21 credits)

ACG 6026	Accounting for Managers
ECP 6705	Managerial Economics I
ECP 6715	Macroeconomic Forecasting for Management
BUL 6810	Legal Environment of Business
MAN 6569	Managerial Decision-Making
MAR 6805	Marketing Management
QMB 6603	Quantitative Methods in Management

Core Courses (28 credits)

ACG 6175	Financial Reporting and Analysis
FIN 6428	Financial Management
FIN 6456	Quantitative Methods in Financial Analysis
MAN 6204	Organization and Management Theory
MAN 6245	Organizational Behavior
MAN 6501	Operations Management
MAN 6830	Organization Information Systems
MAN 6830L	Organization Information Systems Lab
MAN 6726	Strategic Management
MAR 6816	Strategic Marketing Management

Elective Courses (12 credits)

Completion of four approved 6000-level courses offered by two or more CBA units leads to an MBA in General Business. Areas of concentration are also available by completing up to three of the four 6000-level elective courses offered by the following CBA units. One of the electives is required to be taken in the International Area.

CBA Unit	Concentration
Accounting	Accounting
Decision Sciences and Information Systems	Management Information Systems
Finance	Finance
Management and International Business	Organizational Behavior Human Resources Management International Business
Marketing and Business Environment	Marketing

Each area of concentration is subject to approval by the department offering courses in that area. Some areas of concentration may require completion of one or two additional courses beyond the MBA requirements.

Doctoral Degree Programs

The doctoral program in Business Administration is a selective one leading to the Ph.D. degree.

The objective of the Ph.D. program is to emphasize the development of research and teaching skills to ensure that graduates acquire the credentials necessary for placement in leading academic institutions. Each doctoral student's program of study is tailored to mesh student and faculty interests and to maintain a high level of interaction among the students and the faculty. The program requires three to four years of full-time study, including a year to a year-and-a-half of dissertation research. The first year of study is geared toward breadth of knowledge, whereas the second year develops students' depth of knowledge in a particular area of concentration.

Major Areas of Concentration

Accounting
Information Systems
Finance
International Business
Management
Marketing

Admission Requirements

Applicants are considered from students with a wide variety of educational backgrounds, such as business, liberal arts and the sci-

ences. Those who are accepted into the program show strong evidence of ability and scholarly interests.

Potential students should provide the following:

1. Completed application form and processing fee.
2. Three letters of recommendation from academic sources.
3. Official transcripts from all undergraduate and graduate coursework.
4. A report of the Graduate Management Admissions Test (GMAT) score from the Educational Testing Service (the average GMAT score for entering students is above 600).
5. A formal statement of purpose for seeking the doctoral degree.
6. International students whose native language is other than English must also submit an official report of their score on the Test of English as a Foreign Language (TOEFL) from the Educational Testing Service. A minimum score of 500 is required. See the General Admission Requirements for Foreign Students (undergraduate and graduate) in the Admission section of the catalog.

Admission to the program is considered as soon as all the required documents are received. The Doctoral Program in Business Administration at the University encourages all qualified persons to apply and admits applicants without regard to sex, age, race, color, creed, handicap, marital status, national or ethnic origin.

Degree Requirements

General degree requirements for all doctoral candidates are:

1. Demonstration of practical knowledge of research methods and procedures in the areas of statistics, and behavioral sciences; a research project is conducted at the end of the first year of study to ensure that all candidates have acquired the relevant skills.
2. Successful completion of a comprehensive examination at the end of the second year in a major area of concentration to ensure that students are prepared to begin dissertation research.
3. Successful completion and oral defense of doctoral dissertation.

Financial Aid

Applicants to the doctoral program may request financial aid by completing the form included with the

application. Research and teaching stipends are available. The stipend may include both cash award and waiver of tuition, depending upon the applicant's qualifications.

School of Accounting

James H. Scheiner, Professor and Director

Rolf Auster, Professor

Delano H. Berry, Assistant Professor

Lucia S. Chong, Professor

Jack L. Carter, Assistant Professor

Yong S. Choe, Assistant Professor

Lewis F. Davidson, Professor

Manuel Dieguez, Instructor

Mortimer Dittenhoffer, Professor

Donald W. Fair, Instructor and Associate Dean

Georgina Garcia, Instructor

Rosalie C. Hallbauer, Associate Professor

Harvey S. Hendrickson, Professor

Kevin Kemerer, Assistant Professor

David Lavin, Associate Professor

Myron S. Lubell, Associate Professor

David Manry, Assistant Professor

Kenneth S. Most, Professor Emeritus

Leandro S. Nunez, Instructor

Robert B. Oliva, Associate Professor

Felix Pomeranz, Professor, Associate Director and Director, Center for Accounting, Auditing, and Tax Studies

Leonardo Rodriguez, Professor

Ena Rose-Green, Assistant Professor

Bernodette Ruf, Associate Professor

Jerry Turner, Assistant Professor

Barbara T. Uliss, Assistant Professor

Clark Wheatley, Assistant Professor

Richard H. Wiskeman, Jr., Instructor

John Wrieden, Instructor

Harold E. Wyman, Professor and Dean

Doria Yeaman, Associate Professor

Mission Statement

The mission of the School of Accounting is to provide students with an up-to-date education in professional accounting degree programs, with due attention to their quality and timeliness. In light of a marketing and regulatory environment which is impacted by rapid changes in technology.

To provide the professional community in government, industry, and public accounting with graduates who are exceptionally well qualified professionals at various levels and who will have mastered the techniques necessary to manage in a climate of dynamic change.

To create a positive climate for students to develop their ethical value system and lifelong learning

To promote pure, applied and instructional research which expands

the boundaries of knowledge and supports the work of practitioners, and which welds the latest research results to the latest teaching techniques.

To support and recognize the development of the faculty regarding their teaching, research and service responsibilities.

To support the accounting and other professions in South Florida and other areas with life long learning via short courses, conferences, and published materials designed to hone practitioner skills in the latest technical and professional developments and in recognizing environmental trends that may affect future practice.

To provide meaningful knowledge of professional accounting concepts and information to other academic and professional disciplines.

To support the missions and objectives established by the College of Business Administration, and to foster the design and implementation of FIU's strategic and tactical plans.

Degree Programs

The School of Accounting offers two graduate degree programs, Master of Accounting and Master of Science in Taxation. The two programs are designed for students who have completed an undergraduate degree in accounting, or the equivalent, from a regionally accredited college or university. Equivalency of undergraduate degrees will be determined by the Director of the School of Accounting. Students whose degrees are in majors other than accounting will be required to complete business or accounting deficiencies, or both. Before a student with deficiencies may take courses in either program, the Director of the School must approve the student's program of study.

A student with a degree in business who is admitted to the M.Acc. program may be required to complete up to six accounting pre-core courses (21 semester hours) from the following:

ACG 4101	Financial Accounting I	3
ACG 4111	Financial Accounting II	3
ACG 4651	Auditing	3
ACG 4401	Accounting Systems	3
ACG 4341	Management Accounting and Control	3

BUL 4320	Business Law I	3
TAX 4001	Income Tax	3

A student with a non-business degree who is admitted to the M.Acc. program will be required to complete, in addition to the pre-core courses listed above, the seven pre-core courses of the Master of Business Administration, with the exception of BUL 6810 (Legal Environment of Business), for which MAN 6726 (Strategic Management) must be substituted.

Graduate Student Advising and Preregistration

All students taking graduate accounting and tax courses must be fully admitted to a graduate accounting program or have written permission from the Director of the School of Accounting. Registration for all graduate accounting and tax courses must be made through, and evidenced by a proper advisor signature and a stamp of the School of Accounting Graduate Advisor. Graduate students may be preregistered during a two-week period commencing three weeks prior to official university registration.

Master of Accounting (M.Acc.)

The objective of the M.Acc. degree is designed to prepare students for entry and advancement in the accounting profession and to provide the additional formal education needed by persons already in accounting and other fields seeking either a career change or advancement, or both. The program is also designed to satisfy the additional 30 semester hours beyond the Bachelors for the CPA examination.

The M.Acc. degree is available in the concentrations of financial accounting/ auditing, systems, corporate/management accounting, and internal auditing. These are designed to prepare the students for the careers described below:

Concentration/Track	Career
Financial Accounting/ Auditing	Independent Accountant in the public accounting profession
Systems	Accounting systems, consultant, auditor, or officer in a business corporation or public accounting.

Internal Auditing	Industry or Government internal auditor
Corporate Management/Accounting	Internal accountant, or officer in a business corporation.

A student who wishes to sit for the CPA examination must select courses which satisfy the 30 hours of post-baccalaureate study including auditing, law and taxation required by the Florida Statute. Relevant portions of the Florida Statute are detailed below.

M.Acc. Program Concentrations

The M.Acc. program with a concentration in financial accounting/auditing, systems, internal auditing, or corporate/management accounting consists of two parts requiring 30 hours: the accounting core (nine semester hours) and the elective (21 semester hours).

Accounting Core Requirements

ACG 6135	Seminar in Financial Accounting Theory I
ACG 6657	The Environment of Accounting
ACG 6437	Advanced Accounting Systems

Required courses in accounting are not transferable unless approved in advance by the Director of the School of Accounting.

The accounting elective requirements are seven courses (21 semester hours) selected from the following three groups of courses:

1. No more than two tax courses from these:

TAX 6065	Tax Research Practice and Procedure
TAX 6105	Taxation of Corporations I
TAX 6205	Partnership Taxation

2. If sitting for the CPA examination, three courses, which include any 6000-level auditing course and these:

BUL 6831	Business Law II
TAX 6015	Taxation of Corporations and Partnerships

3. Additional 6000-level courses approved by the Director of the School of Accounting with a minimum of four courses (12 semester hours) in a single concentration of financial accounting/auditing, systems, internal auditing, or corporate/management accounting.

Master of Science in Taxation

The objective of the M.S.T. program is to prepare students for entry or advancement in the specialized area of taxation. Students may develop their own specializations. The program is also designed to satisfy the additional 30 semester hours beyond the Bachelors for the CPA examination. The final program of studies must be approved by Director of the School of Accounting.

The M.S.T. program consists of two parts requiring 30 hours of coursework: tax core (12 semester hours); and electives (18 semester hours).

Tax Core Requirements

TAX 6065	Tax Research Practice and Procedure
TAX 6105	Taxation of Corporations I
TAX 6405	Estate and Gift Taxation
TAX 6875	Current Developments in Taxation

The elective requirements are six additional 6000-level courses approved by the Director of the School of Accounting three of which must be tax courses excluding TAX 6015, TAX 6005, and TAX 6935.

Students admitted to the M.S.T. program who wish to sit for the CPA examination and who are required to complete deficiencies in undergraduate accounting by completing the accounting pre-core courses, are not required to take TAX 4001 (Income Tax) as part of the accounting pre-core.

Florida CPA Requirement

Completion of a Bachelor of Business Administration degree program with emphasis in accounting, while available, will not be accepted alone by the Florida State Board of Accountancy as meeting the requirements for the additional credit hours and specific courses required for the CPA Examination.

With a carefully planned program of study, a student who earns either a M.Acc. or a M.S.T., will be qualified to sit for the Certified Public Accounting Examination, and upon successful completion of the examination be certified in the State of Florida. There is no additional experience requirement.

Executive Master of Science in Taxation

This is a special two-year program charging tuition plus additional fees limited to a select number of students. The objective of this program is to provide an educational alternative, tailored to meet the needs and seasonal constraints of the working professional who wishes to obtain a Master of Science in Taxation in a flexible time span. The program is also designed to satisfy the additional 30 semester hours beyond the Bachelors for the CPA examination. For information on the program call 919-5514.

Decision Sciences and Information Systems

Enzo Valenzi, *Professor and Acting Chairperson*

Dinesh Batra, *Associate Professor*

Joyce J. Elam, *Professor and James L. Knight Eminent Scholar*

Sushil K. Gupta, *Professor and Vice Provost*

Christos P. Koulamas, *Professor*

Jerzy Kyparisis, *Professor*

Tomislav Mandakovic, *Professor*

Krishnamurthy Muralidhar, *Associate Professor*

Kenneth E. Murphy, *Assistant Professor*

Rajiv Sabherwal, *Associate Professor*

Radhika Santhanam, *Associate Professor*

Larry A. Smith, *Associate Professor*

Steve H. Zanakis, *Professor*

Peter J. Zegan, *Instructor*

The Department of Decision Sciences and Information Systems offers a concentration in the Master of Business Administration program.

Finance

John S. Zdanowicz, *Professor, Chairperson, and Director, Center for Banking and Financial Institutions*

Gary Anderson, *Associate Professor*

Joel Barber, *Associate Professor*

Robert Bear, *Professor*

Gerald O. Bierwag, *Professor, Ryder System*

Chun-Hao Chang, *Associate Professor*

Robert T. Daigler, *Associate Professor*

Krishnan Dandapani, *Associate Professor*

Maria E. de Boyrie, *Assistant Professor*

Shahid Hamid, *Associate Professor*

James Keys, *Instructor*

Simon Pak, *Associate Professor*

Ali M. Parhizgari, *Professor and Director, MBA Program*

Arun Prakash, *Professor*

Emmanuel Roussakis, *Professor and Director, Certificate Programs*

Lee Sevald, *Instructor*

Michael Sullivan, *Assistant Professor*

William Welch, *Associate Professor, Professor and Director, Center for Banking and Financial Institutions*

Master of Science in Finance

This graduate program leading to the degree of Master of Science in Finance (MSF) is offered primarily for students with an undergraduate business degree who want to concentrate in Finance at the graduate level. The objective of the Master of Science in Finance program is to extend analytical decision making abilities in the solution of problems related to obtaining and utilizing real and financial assets and liabilities. The program provides the graduates with solid theoretical and practical knowledge of current developments and opportunities as they pertain to banking, corporate finance, investment, portfolio management, financial risk management/financial engineering, financial markets institutions and international finance.

Content and Structure

The program has a minimum of 36 semester hours (12 courses).

Group 1 - Common Body of Knowledge

All or some of the common body courses can be waived (without substitution) depending on the student's prior education. Students with a recent degree in Business Ad-

ministration from a regionally accredited university should be able to waive most or all of the Common Body Courses. The areas covered under common body of knowledge are financial and cost accounting, legal environment in business, economics, statistics, financial management, strategic management, operations management, managerial decision making, organizational information systems, marketing, and organizational theory. If a student is deficient in any of these areas, the student will be required to fulfill the requirement by taking the appropriate courses. As part of the common body for Finance majors, students will be required to take FIN 6428 (Financial Management); this requirement may, but not necessarily, be waived if the student has satisfactorily completed two undergraduate Corporate Finance courses.

Group 2 - Finance Core Courses

All MSF-Finance students are required to take the following courses:

FIN 6246	Financial Markets and Institutions
FIN 6456	Quantitative Methods in Financial Analysis
FIN 6516	Security Analysis
FIN 6636	International Finance
FIN 6804	Theory of Finance

Group 3 - Finance Electives

Nine hours of approved Finance electives, other than those mentioned in Group 1 and Group 2, must be completed.

Group 4 - Four Related Electives

Students will be required to select four 6000-level courses from concentrations in business, economics, computer science, and other related areas. Students will be permitted, but not required, to concentrate in one area. These electives must be chosen with prior approval of the MSF program advisor.

The 36 semester hours requirement may be reduced to 30 for students who possess an accredited Master's Degree in Business Administration (this would result in the reduction of two related electives). Up to two graduate courses may be transferred in from another accredited school, even if no advanced degree was obtained.

Management and International Business

Gary Dessler, *Professor and Chairperson*

Constance S. Bates, *Associate Professor*

Larry W. Cox, *Assistant Professor*

Herman Dorsett, *Associate Professor*

Dana L. Farrow, *Professor and Associate Dean*

Ernest Friday, *Assistant Professor*

Ronald Gilbert, *Associate Professor*

Joyce Harrigan, *Instructor*

Richard M. Hodgetts, *Professor*

William T. Jerome, *Distinguished University Professor*

K. Galen Kroeck, *Associate Professor*

Jan B. Luytjes, *Professor*

Karl O. Magnusen, *Associate Professor*

Modesto A. Maidique, *Professor and University President*

Sherry Moss, *Associate Professor*

Stephen L. Mueller, *Assistant Professor*

Eleanor Polster, *Instructor and Graduate Coordinator*

Antonio F. Pradas, *Instructor and Associate Dean*

Kannan Ramaswamy, *Associate Professor*

Leonardo Rodriguez, *Professor*

Donald Roomes, *Instructor and Coordinator, Weekend BBA*

John D. Sargent, *Assistant Professor*

Ronnie Silverblatt, *Associate Professor*

George Sulija, *Associate Professor*

William M. Taggart, *Professor*

Anisya S. Thomas, *Associate Professor*

Enzo Valenzi, *Professor*

Mary Ann Von Glinow, *Professor*

Center for International Business Education and Research (CIBER)

The College of Business Administration and its Department of Management and International Business have been funded by the U.S. Department of Education to establish a Center for International Business Education and Research. This prestigious Center is one of only about 25 such centers in the United States. Administered by the Management and International Business Department, the Center's overall aim is to contribute to improving America's capacity for international understanding and economic enterprise by providing international educa-

tion, research, and training activities that help U.S. businesses prosper in an international economy. The Center at FIU is actively involved in developing and offering training programs including the Global Manager Program, funding international business research, and providing funding for the development and administration of various education programs including the CIBER/Executive MIB Program, described below.

Master of International Business

The objective of the Master in International Business is to prepare students who seek a career in some aspect of global business. The general aim is to expose graduate students to both the functional fundamentals of business, as well as the international aspects of the functional areas and, in certain cases, an opportunity to study an international area in greater depth. There has been a rapid expansion in the field of international trade and investments, and virtually no business today is exempt from worldwide competitive forces. The business person today needs both a keen awareness of domestic business practices, as well as the managerial aspects of doing business in an international arena. Also required is a global political awareness and sensitivity in order to develop viable corporate strategies.

The program is designed in such a manner as to accommodate undergraduate business majors as well as non-business majors. The latter will have to meet the pre-core requirements which focus on the basic functional aspects of business and the related skills that might be necessary. Undergraduate business majors who have not taken the equivalent of any of the pre-core courses or whose degrees were awarded five or more years prior to their date of admission to the MIB at FIU also would have to meet these pre-core requirements. (See also 'transfer credit' earlier in this catalog).

Pre-Core Courses

MAN 6245	Organizational Behavior
ACG 6026	Accounting for Managers
MAR 6805	Marketing Management
QMB 6603	Quantitative Methods in Management

MAN 6830	Organization Information Systems
MAN 6830L	Organization Information Systems Lab
ECP 6705	Managerial Economics I
MAN 6569	Managerial Decision-Making
FIN 6428	Financial Management

Core Courses

ACG 6255	International Accounting
BUL 6850	International Business Law
FIN 6636	International Finance
MAN 6603	Problems in Comparative Management
MAN 6635	International Business Policy
MAR 6158	International Marketing
MAN 6416	Corporate Negotiations
MAN 6608	International Business

In addition to the core, MIB candidates are required to take and pass a competency exam at the intermediate level in a commercial language other than English. All electives must be approved by the advisor and the chairperson of the department, in writing. All students must have a signed, approved program of study by the end of their first semester of study. Students must receive their advisor's approval prior to registering for any course.

Students may choose their five electives from those listed below so as to have a concentration or specialization within a particular area. For example, suggested sample course sequences for a concentration in International Banking is given below:

International Banking Concentration

FIN 6315	Commercial Banking
FIN 6325	Current Issues in Commercial Banking
FIN 6346	Credit Analysis
FIN 6625	International Bank Management
FIN 6626	International Bank Lending Policies and Practices

Other concentrations are possible. Please see the advisor.

Suggested Electives

FIN 6625	International Bank Management
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FIN 6626	International Bank Lending Policies and Practices
MAN 6615	International Labor-Management Relations
MAN 6675	Special Topics in International Business
MAN 6606	International Business Environment
REE 6935	Seminar in International Real Estate
ECO 5709	The World Economy
MAN 6601	International Management
MAN 6679	Master's Project in International Business
MAN 6805	Entrepreneurship

Suggested sequence of courses to be taken assuming full-time status:

Graduate with Non-Business Degree

	First Year	
Fall	Spring	Summer
ACG 6026	MAN 6245	FIN 6428
MAN 6608	MAR 6805	MAR 6158
ECP 6705	MAN 6569	Elective
MAN 6830	QMB 6603	
MAN 6830L		

	Second Year	
Fall	Spring	Summer
ACG 6255	MAN 6608	Elective
FIN 6636	MAN 6416	Elective
BUL 6850	MAN 6635	MAN 6601
MAN 6603		

Graduate with Business Degree

	First Year	
Fall	Spring	Summer
ACG 6255	Elective	MAR 6158
MAN 6603	MAN 6416	Elective
FIN 6636	MAN 6635	Elective
Elective		

	Second Year	
Fall		
BUL 6850	Elective	Elective

The purpose of sequencing the courses is not only to assure having the appropriate prerequisites for the program, but also to build a class consciousness which may lead to an *esprit-de-corps* that can be of great value at some future time.

CIBER/Executive Master of International Business Track

Like the MIB in general, the CIBER/Executive Master of International Business program is a specialized program which has as its objective the preparation of students for managerial and executive careers in international business. The program aims to provide students with the internationally-oriented cross-functional business skills and cross-cultural awareness that are essential for engaging successfully in careers in international business.

This program generally requires that students with or without appropriate undergraduate business coursework take 14-15 courses (45 credit hours) of coursework, although students requiring preliminary remedial coursework may be required to complete such work at the discretion of the Executive Track's Director. Whether taught on-campus or off-campus, this is generally a full-time program in which each cohort of students progresses through the program together following the same lock-step sequence of courses. Required classes include separate and special internationally-oriented sections of MAN 6245, Organizational Behavior; ACG 6026, Accounting for Managers; MAR 6806, Marketing Management; FIN 6428, Financial Management; QMB 6603, Quantitative Methods; MAN 6830, Organization Information Systems; BUL 6850, International Commercial Law; MAN 6635, International Business Policy; MAN 6416, Corporate Negotiations; MAN 6608, International Business; MAN 6602, International Management; MAN 6675, Special Topics in International Business; ECO 5709, The World Economy, and six credits in a masters project such as MAN 6679. Admission to and graduation from this program is open only to students specifically admitted to the Executive Track MIB by the Director of the CIBER/Executive Track Program, and Executive Track students must have an Executive Track Program of Studies signed by the Director before taking any courses in this program. Students must pass a foreign language competency exam prior to graduation.

Marketing and Business Environment

Barnett A. Greenberg, *Professor and Chairperson*

Mary Jane Burns, *Assistant Professor*

Deborah Cohen, *Assistant Professor*

Dennis J. Gayle, *Associate Professor*

Jonathan N. Goodrich, *Professor*

Robert Hogner, *Associate Professor*

Carl Kranendonk, *Instructor*

Paul Miniard, *BMI Professor of Marketing*

J.A.F. Nicholls, *Professor*

Marta Ortiz, *Associate Professor*

Karen Paul, *Professor and Associate Dean*

Lynda Raheem, *Instructor and Assistant Dean*

Sydney Roslaw, *Professor Emeritus*

Bruce Seaton, *Associate Professor*

Philip Shepherd, *Associate Professor*

Kimberly Taylor, *Assistant Professor*

John Tsalikis, *Associate Professor*

The Department of Marketing and Business Environment offers a concentration in the Master of Business Administration program, the Graduate Certificate in Marketing, and the Graduate Certificate in Business Environment (see 'Certificate Programs').

Certificate Programs

Advanced Certificate in Accounting

The purpose of the certificate program is to provide a structured program of graduate level instruction for those who do not wish to enroll in a graduate degree program; who need to satisfy mandatory continuing professional education requirements of any state; and who need to satisfy post-baccalaureate course credits to qualify for the CPA in Florida or any other state requiring a fifth year of education to sit for the CPA examination.

Admission

To be admitted to the certificate program, a student must have graduated from an accredited university degree program in accounting, or be a graduate of any other business discipline, provided that the student's transcript shows a completion of at least nine semester hours in accounting courses beyond the principles level with grades of 'B' or higher. Each student's transcript will be evaluated by an advisor to ensure that all deficiencies are satisfied.

Students applying for admission to the certificate program must submit current transcripts from all colleges or universities attended.

The certificate program consists of ten courses selected from the list below. However, students are allowed to attend classes in the program without completing the entire certificate program. None of these courses will be transferable for graduate credit in College of Business Administration degree programs.

Required Courses: (Five Courses)

ACG 5137	Update of Current Standards and Principles of Financial Accounting
ACG 5307	Advanced Managerial Accounting
ACG 5507	Issues and Problems in Accounting for Nonprofit Entities
ACG 5627	Systems Auditing
TAX 5725	Tax Planning for Managers

Elective Courses: (15) (five courses) from the following:

ACG 5256	International Dimensions of Accounting and Auditing
ACG 5386	Controllershship
ACG 5395	Seminar in Managerial Accounting
ACG 5546	Governmental Planning and Budgetary Accounting, with Cases
ACG 5675	Operational Auditing
ACG 5696	Seminar in Auditing
ACG 5806	Seminar in Financial Accounting
ACG 5905	Independent Study in Accounting and Auditing
ACG 5936	Special Topics in Accounting and Auditing
BUL 5105	Legal Environment of Business
BUL 5661	Law for Accountants
BUL 5662	Accountant's Liability
TAX 5066	Tax Research and Reporting
TAX 5106	Corporate and Partnership Taxation
TAX 5406	Taxation of Estates and Trusts
TAX 5506	International Dimensions of Taxation
TAX 5875	Seminar in Taxation
TAX 5904	Independent Study in Taxation
TAX 5936	Special Topics in Taxation

A 2.67 GPA must be attained for successful completion of the program and awarding of the certificate. Any course completed with less than a 2.0 GPA will not be accepted toward completion of the program and awarding of the certificate.

Banking Certificate

The CIB (Certificate in Banking) is designed for practicing bank managers and bank employees. The core program consists of four undergraduate or graduate Finance courses. Upon successful completion of the four course sequence, a Certificate signed by the Dean of the College of Business Administration will be awarded.

Participants in the CIB Program must meet certain admission require-

ments. In general, those intending to take undergraduate level courses must have an Associate of Arts Degree or its equivalent, and must meet the other lower division preparation requirements of the College. Participants planning to take graduate level courses must hold a Bachelor's degree, submit a satisfactory score on the Graduate Management Admissions Test, provide transcripts of all undergraduate work, and meet all admission requirements of the College's graduate programs.

Program requirements

FIN 6487	Financial Risk Management-Financial Engineering or
FIN 6428	Financial Management
FIN 6426	Financial Management Policies
FIN 6246	Financial Markets and Institutions
FIN 6315	Commercial Banking
FIN 6346	Credit Analysis

Applicants who are interested in pursuing a Master's degree in Finance should take FIN 6426, FIN 6246, FIN 6315, and FIN 6346 rather than FIN 3414, FIN 4303, FIN 4324, and FIN 4345.

Graduate Certificate in Business Environment

The purpose of the Certificate Program in Business Environment is to provide a graduate-level educational experience for those students who desire to further familiarize themselves with the scope, structure and challenges of the business environment, without wishing to pursue a Masters degree program. Accordingly, the audience for this certificate consists of managers who need to satisfy continuing educational requirements or individual interests, within the areas of public issues management, business ethics codes and practices, social audit development, environmental regulation, and international aspects of the business environment.

To be admitted in the Certificate Program in Business Environment, a student must meet the general requirements for graduate study in the College of Business Administration. All students must have taken MAN 3701 (Business and Society) or an accepted substitute at the un-

dergraduate level. The Certificate in Business Environment consists of five (5) courses as follows:

Required Courses

MAN	Seminar in Public Issues Management
MAN 6715	Business Environment and Public Policy
MAN 6606	International Business Environment
MAN	Special Topics in Business Environment
MAN	Independent Study in Business Environment

International Bank Management Certificate

The Certificate in International Bank Management (CIBM) is designed to train existing and future bankers in the areas of international banking policy, practice, and technique. Its interest is to provide an interface between the domestic and international side of banking for bank managers. This certificate is not open to finance majors.

Participants in the CIBM must meet the admission requirements listed for the Certificate in Banking Program.

Required Courses

FIN 6487	Financial Risk Management-Financial Engineering or
FIN 6426	Financial Management Policies
FIN 6315	Commercial Banking or
FIN 6325	Current Issues in Commercial Banking or
FIN 6346	Credit Analysis and Loan Evaluation
FIN 6636	International Finance
FIN 6625	International Bank Management

Certificate in International Business

A Certificate program is available to graduate students wishing to acquire an in-depth understanding of international business, but who find it unnecessary or inconvenient to enroll for a graduate degree program. Such students may already have the MBA degree, or an undergraduate business degree.

Students in the Certificate in International Business program must meet the general admission requirements for graduate study in the College of Business Administration, and satisfactorily complete an approved program of study consisting of four courses, as follows:

MAN 6608	International Business
MAN 6635	International Business Policy

and two graduate international business courses approved by the Chairperson of the Department of Management and International Business.

Graduate Certificate in Marketing

The purpose of the Graduate Certificate Program in Marketing is to provide a structured program in Marketing at the graduate level of instruction. The Program is primarily designed for those students who do not wish to enroll in a graduate degree program; managers who need to satisfy continuing professional education requirements, and marketing executives who wish to pursue studies in the areas of marketing, international marketing and/or strategic marketing. All courses must be taken at Florida International University. Students enrolled in the MBA program are not eligible for this certificate.

To be admitted in the Graduate Certificate Program in Marketing, a student must meet the general requirements for graduate study in the College of Business Administration. Students without a background in Marketing are required to take:

MAR 6805	Marketing Management
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Required Courses

MAR 6646	Advanced Marketing Research
MAR 6506	Advanced Consumer Behavior
MAR 6816	Strategic Marketing Management

To complete the Certificate Program in Marketing, the student can choose two out of the following courses:

MAR 6158	Advanced International Marketing
MAR 6336	Advanced Promotional Strategy
MAR 6406	Advanced Sales Management
MAR 6075	Current Issues in Marketing

Professional Development Certificate Programs

Certificate In Managing Quality Health Care Systems

Combining study of the functional areas of management with development of human relations skills, this program prepares managers for success in today's health care environment. This Certificate was created for the health care manager whose clinical education did not prepare him/her for managing a rapidly changing health care industry. In addition, it prepares participants to address tomorrow's challenges. Quality standards mandated by the Joint Commission on Association of Health Care Organizations is an overarching theme. A community advisory council of health care executives provides continuous input to assure the blending of theory and practice in the educational experience. This two semester program qualifies for several professional continuing education units, an earned Certificate, and limited consideration for credit in certain Colleges and Schools within FIU.

Training and Human Resource Development Certificate

Based in academic theory and models, this program uses hands-on techniques and applications that build the competencies to operationalize its conceptual framework. This two semester program is the most comprehensive non-credit program for adult educators in the United States. In addition to an earned Certificate and C.E.U.'s, the program qualifies for credit consideration in several University schools. Recognized by the American Society for Training and Development, the program was showcased in It's April, 1989 Issue of the Training and Development Journal. The certificate sets a standard for professionalism for South Florida trainers.

Human Resource Certificate

Created for the practitioner with up to five years experience in a personnel or human resource department, this Certificate program meets once a week for 11 weeks. It covers the functions of personnel administration with emphasis on the ever-changing legal issues affecting its practice. The program surveys the field and concentrates on skill building in the areas of interviewing, using and developing appropriate forms, and building a professional network. A Certificate as well as CEU's may be earned.

Course Descriptions

Definition of Prefixes:

ACG-Accounting; BAN-Banking; BUL-Business Law; CIS-Computer and Information Systems; GEB-General Business; FIN-Finance; MAN-Management; MAR-Marketing; QMB-Quantitative Methods in Business; REE-Real Estate; RMI-Risk Management and Insurance; TAX-Taxation.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

Departmental or School/College Designation:

AC - Course taught by School of Accounting

BA - Interdepartmental course taught by College of Business Administration

DS - Course taught by Department of Decision Sciences and Information Systems

EC - Course taught by Department of Economics, College of Arts and Sciences

FI - Course taught by Department of Finance.

MA - Course taught by Department of Management and International Business

ME - Course taught by Department of Marketing and Business Environment

MS - Course taught by Department of Mathematical Sciences, College of Arts and Sciences

ACG 5137 Standards and Principles of Financial Accounting (AC) (3). A survey of official pronouncements on accounting standards and principles. Prerequisite: Permission of Accounting certificate program advisor.

ACG 5256 International Dimensions of Accounting and Auditing (AC) (3). Review of and reasons for variations in accounting and auditing practices throughout the world; explore initiatives undertaken to promote transparency, harmonization, and standardization to facilitate understanding of financial statements prepared under various conventions. Prerequisite: Permission of Accounting certificate program advisor.

ACG 5307 Advanced Managerial Accounting (AC) (3). In depth study of determination and control of production costs; budgetary control; CVP analysis; and alternative methods of performance measurement and analysis. Prerequisite: Permission

of Accounting certificate program advisor.

ACG 5386 Controllership (AC) (3). Study of controllership function; role of controller in planning, accounting for, and evaluating company performance; relationship with internal auditing. Prerequisite: Permission of Accounting certificate program advisor.

ACG 5395 Seminar in Managerial Accounting (AC) (3). An in-depth study of selected areas of managerial accounting. Prerequisite: ACG 4341 or equivalent and Permission of Accounting certificate program advisor.

ACG 5507 Issues and Problems in Accounting for Non-Profit Entities (AC) (3). Study and analysis of accounting, reporting, and control standards and practices of non-profit organization - including accounting for governments, hospitals, universities, churches, and others. Prerequisite: Permission of Accounting certificate program advisor.

ACG 5516 The Environment of Government Accounting (AC) (3). Basic public administration emphasizing governmental processes with which governmental accountants and auditors come into contact. Includes legislative and administrative activities and operating functions having high accounting and auditing involvement. Prerequisite: Permission of accounting certificate program advisor.

ACG 5518 Historical and Comparative Government Accounting (AC) (3). Research and reporting on subjects in the history of, or on comparative aspects of, government accounting. Prerequisite: Permission of accounting certificate program advisor.

ACG 5519 Contemporary Issues in Government Accounting (AC) (3). Research and reporting on current issues related to government accounting. Prerequisite: Permission of accounting certificate program advisor.

ACG 5545 Analysis of Governmental Financial Reports (AC) (3). Describes content of government financial reports and analytical methods employed by internal and external users; covers concepts of disclosure, budget/actual analysis, credit evaluations, operational evaluations, measures of fiscal capacity and signs of fiscal stress. Prerequisites: Per-

mission of accounting certificate program advisor.

ACG 5546 Governmental Planning and Budgetary Accounting with Cases (AC) (3). Budgeting in governments emphasizing formulation based on accounting and auditing input. Budget execution and analysis of deviations of actual from budgets; study of ZBB, PPBS, and MBO systems and their behavioral and accounting bases. Prerequisites: Permission of accounting certificate program advisor.

ACG 5596 Accounting for Specialized Governmental and Nonprofit Entities (AC) (3). Survey course by guest lecturers covering detailed accounting concepts, procedures, and reporting for enterprise fund entities, educational entities, and unique types of internal service funds. Prerequisites: Permission of accounting certificate program advisor.

ACG 5627 Systems Auditing (AC) (3). Principles and procedures of auditing systems of information, including the function, approach, and techniques of systems auditing and the evaluation of systems controls. Emphasis on auditing computerized systems. Prerequisite: Permission of Accounting certificate program advisor.

ACG 5675 Operational Auditing (AC) (3). Examines operational auditing as a professional discipline for testing and evaluating totality of planning and operating controls; particular attention to development, selling and implementation of recommendations for operating improvement and cost containment. Prerequisite: Permission of Accounting certificate program advisor.

ACG 5696 Seminar in Auditing (AC) (3). An in-depth study of recent developments in auditing. Prerequisite: ACG 4651 or equivalent and permission of Accounting certificate program advisor.

ACG 5806 Seminar in Financial Accounting (AC) (3). An in-depth study of recent developments in financial accounting. Prerequisite: ACG 4111 and permission of Accounting certificate program advisor.

ACG 5846 Statistical Methods in Accounting and Auditing (AC) (3) Formulation, analysis and implementation on a microcomputer of mathematical models in financial and managerial

accounting and auditing. Prerequisite: Permission of Accounting certificate advisor.

ACG 5905 Independent Study in Accounting and Auditing (1-3). Individual conferences, supervised readings, and reports on personal investigations. Prerequisites: Written permission of instructor, accounting certificate program advisor, School Director, and Dean.

ACG 5936 Special Topics in Accounting and Auditing (AC) (3). For groups of students who wish an intensive study of a particular topic or a limited number of topics not otherwise offered in the curriculum. Prerequisite: Written permission of instructor, accounting certificate program advisor, School Director, and Dean.

ACG 6026 Accounting for Managers (AC) (3). Presentation of the nature, techniques and uses of accounting from the perspective of people who manage businesses and investments in businesses. Covers both financial and management accounting. Not open to M.S.T. or M.Acc. students. (F,S,SS)

ACG 6135 Seminar in Financial Accounting Theory I (AC) (3). A study of the theoretical structure of accounting, with special attention to asset and income definition, recognition, and measurement; and an appraisal of pronouncements of professional accounting organizations. Prerequisite: Baccalaureate in accounting or equivalent and admission to a graduate program in the School of Accounting or permission of the School Director. (F,S,SS)

ACG 6145 Seminar in Financial Accounting Theory II (AC) (3). A continuation of ACG 6135, with emphasis on the problems of accounting for price-level changes and other current issues. Prerequisite: ACG 6135 and admission to a graduate program in the School of Accounting or permission of the School Director.

ACG 6175 Financial Reporting and Analysis (AC) (3). Comprehensive treatment of analysis of financial statements as aid for decision making; looks at current state of financial reporting practices and impact of published statements on economic systems. Prerequisites: ACG 6026, FIN 6428 or equivalent. Not open to M.S.T. or M.Acc. students. (F,S,SS)

ACG 6205 Financial Accounting III (AC) (3). Underlying concepts and ethical, regulatory and business environment of financial reporting, with emphasis on accounting for partnerships, international corporations, and business combinations. Prerequisite: ACG 4111 with a grade of 'C' or higher and admission to a graduate program in the School of Accounting or permission of the School Director. (F,S,SS)

ACG 6245 Accounting and Auditing Compliance Issues (AC) (3). Corporate, government and public accounting compliance with response to institutional and political regulation; attention to compliance in specialized industries such as health care, transportation, financial institutions real estate and construction. Prerequisites: ACG 4111 or equivalent, ACG 4651 and admission to a graduate program in the School of Accounting or permission of the School Director.

ACG 6255 International Accounting (AC) (3). Comparative analysis of accounting concepts and practices in different countries; international accounting standards; problems of accounting for multinational corporations, including transfers of funds and income measurements; the role of accounting in national economic development. Prerequisite: ACG 6026 or equivalent, and admission to a graduate program in the School of Accounting or permission of the School Director. (F,S,SS)

ACG 6295 Financial Accounting IV (AC) (3). The application of accounting principles in the production of information for selected topics in financial statements with extensive examination and evaluation of FASB and international standards of accounting. Prerequisites: ACG 6205 and admission to a graduate program in the School of Accounting or the permission of the Director.

ACG 6345 Management Accounting and Control (AC) (3). Accounting concepts and techniques useful in evaluation, planning, organization and control of a business enterprise, with attention to methods of accounting for production activities; ethics in management accounting. Prerequisites: ACG 4111 and admission to a graduate program in the School of Accounting or permission of the School Director. Not open to those with undergraduate accounting degrees.

ACG 6346 Seminar in Managerial Accounting I (AC) (3). Analysis of transfer pricing; product pricing; incremental profit analysis; decision models; alternative performance measurement techniques; and other advanced topics. Prerequisite: ACG 4341 or ACG 6026, and admission to a graduate program in the School of Accounting or permission of the School Director. (F)

ACG 6356 Seminar in Managerial Accounting II (AC) (3). A study of the controllership function in corporate organizations; an appraisal of the controller's role in planning, accounting for, and evaluating company performance; and relationship to internal audit function. Prerequisite: ACG 4341 and admission to a graduate program in the School of Accounting or permission of the School Director.

ACG 6385 Managerial Control and Controllership (AC) (3). Control methods for management; control structure, planning and forecasting for budgets; the functions of controllership, including cash management, risk management, investments, tax administration and records management. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

ACG 6405 Seminar in Accounting Information Systems I (AC) (3). Accounting information systems security and control and legal and ethical compliance; control of computer failure and abuse and compliance with laws, regulations, and standards. Computer usage required. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director. (F)

ACG 6415 Seminar in Accounting Information Systems II (AC) (3). Accounting information systems for strategic use in the management of competitive enterprises; budgeting, performance measurement, and cost accounting for generating strategic information. Computer usage required. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

ACG 6437 Advanced Accounting Systems (AC) (3). Development and control of information systems for accounting, emphasis on new micro-computer technology, software engineering, methods of data processing and database management

systems. Prerequisites: ACG 4401 or equivalent and admission to a graduate program in the School of Accounting or permission of the School Director. (F,S,SS)

ACG 6445 Accounting Information Systems Analysis and Design (AC) (3). Accounting applications of information systems analysis and design concepts, methods, and tools; requirements, design, control, and prototyping of accounting information systems. Computer usage required. Prerequisites: Admission to a graduate program in the School of Accounting or permission of the School Director. (SS)

ACG 6455 Accounting Information Systems Technology, Control and Audit I (AC) (3). Accounting applications, control, and audit of large computer systems; technology, control concepts and procedures, audit testing and documentation, and control and audit software. Computer usage required. Prerequisites: Admission to a graduate program in the School of Accounting or permission of the School Director. (SS)

ACG 6456 Accounting Information Systems Technology, Control and Audit II (AC) (3). Accounting applications, control, and audit of small computer systems; technology, control concepts and procedures, audit testing and documentation, and control and audit software. Computer usage required. (F)

ACG 6506 Governmental and Institutional Accounting (AC) (3). Budgeting, accounting, and reporting standards and practices for government and other not-for-profit entities. Prerequisite: ACG 4111 and admission to a graduate program in the School of Accounting or permission of the School Director. (F,S)

ACG 6515 Advanced Governmental Accounting (AC) (3). Treats the developing concept of consolidated financial statements for governments. Also covers advanced areas of accounting, e.g., concepts, investment accounting, grant accounting, and pension accounting. Prerequisites: ACG 6505, ACG 6584, admission to graduate program in School of Accounting or permission of School Director.

ACG 6517 Audit of Governmental Entities (AC) (3). Covers methods of audits of governments by independent public accountants, coordination with internal audit staffs; describes audits of governments by

internal auditors (audits of fidelity, efficiency and effectiveness); covers current single audit concept. Prerequisites: ACG 6505, admission to the graduate program in the School of Accounting, or permission of School Director.

ACG 6625 EDP Auditing Concepts (AC) (3). Understanding and application of concepts and procedures of auditing computer information systems; analysis, testing, and documentation of computer security and controls for management and financial statement reports. Prerequisites: Admission to a graduate program in the School of Accounting or permission of the School Director. (F,S,SS)

ACG 6655 Auditing and Accounting Systems (AC) (4) Standards and procedures of auditing, ethics and responsibilities of auditors, audit evidence, reporting, international standards; design and control of accounting information systems. Prerequisites: ACG 4111 with a grade of 'C' or higher and admission to a graduate program in the School of Accounting or permission of the School Director. Not open to those with a undergraduate accounting degrees.

ACG 6657 The Environment of Accounting (AC) (3). Economics and scope of accounting practice in context of self-regulated profession, public policy constraints, complex business structures and innovative transactions, and rapidly changing information technology with extensive reference to business periodicals and on-line databases. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director. (F,S,SS)

ACG 6675 Internal Auditing (AC) (3). This course examines auditing in depth as a professionalized discipline for reviewing testing, and evaluating the financial and the operational activities and controls of an economic entity. Focus will be directed to private sector profit seeking entities as well as governmental and other nonprofit organizations. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director. (F,S)

ACG 6676 Advanced Internal Auditing (AC) (3). Special topics in internal auditing such as forensic auditing, analytical auditing, management consulting, work with external auditors, ethics, multinational

aspects, evaluation methods, quality control, new technologies and recent research. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director. (F)

ACG 6677 Applied Internal Auditing (AC) (3). The expansion of the internal audit process into such areas as administrative and support functions; line functions such as research, sales, and production; and special areas such as compliance, budgeting and controls. Course is taught by outside lecturers. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director. (S)

ACG 6696 Current Issues in Auditing (AC) (3). Professional and technical aspects of auditing practice; introduction to SEC; ethics and legal responsibilities; emergence of non-public practice; public expectations and professional reality; the impact of technology; international auditing; recent auditing developments. Prerequisite: ACG 4651 and admission to a graduate program in the School of Accounting or permission of the School Director.

ACG 6835 Behavioral Accounting (AC) (3). Study of the effect of the process and products of accounting and of the relation of changes in the process and products to individual and group behavior; consideration of ways in which accounting can aid individuals and organizations to attain their goals. Prerequisites: ACG 4111 and 4341 or equivalents, and admission to a graduate program in the School of Accounting or permission of the School Director. (F,S)

ACG 6845 Accounting and Quantitative Methods (AC) (3). Study of statistical and management science techniques that are or may be utilized in financial and managerial accounting. Prerequisites: QMB 3150 and ACG 4401, or equivalents, and admission to a graduate program in the School of Accounting or permission of the School Director.

ACG 6875 Evolution of Accounting Thought (AC) (3) The cultural origins of accounting and its traditional controversies, from pre-historic time onward, and in an international context. Prerequisites: Admission to graduate program in School of Accounting or permission of School Director

ACG 6885 Accounting Research and Reporting (AC) (3). Examine the projects relating to historical and current problems in public accounting practice, and preparation of appropriate reports in oral and written formats, under a variety of professional settings. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

ACG 6905 Independent Study in Accounting (AC) (1-3). Individual conferences; supervised readings; reports on personal investigations. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

ACG 6935 Special Topics in Accounting (AC) (1-3). Intensive study for groups of students of a particular topic or a limited number of topics not otherwise offered in the curriculum. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

ACG 7157 Seminar: Theory and Contemporary Research in Financial Accounting (AC) (3). An evaluative overview of the classical literature in financial accounting and the contemporary empirical research published in the leading scholarly journals. Examined are income determination theories, normative accounting principles, accounting information and stock prices, and principal-agent relationships. Prerequisite: Permission of Doctoral advisor in Accounting.

ACG 7177 Seminar: Accounting Information and Security Prices (AC) (3). An in-depth examination of accounting information and security prices within capital markets theory, including a thorough examination of the cross-sectional properties and time-series properties of accounting numbers and the importance of research findings and new developments in research methodology. Prerequisite: Permission of Doctoral advisor in Accounting.

ACG 7436 Seminar: Information Value and Agency Research Accounting (AC) (3). An in-depth examination of the research paradigm and the associated empirical research in accounting and auditing. Examined are the issues of information value, risk aversion, risk sharing contracts, as well as accountability from the standpoint of monitoring

contracts. Prerequisite: Permission of Doctoral advisor in Accounting.

ACG 7695 Seminar: Contemporary Research in Management Accounting and Auditing (AC) (3). A broad overview of classical and contemporary empirical research in managerial accounting and auditing including budget and performance review, decision making, information analysis, professional judgment, sampling problems, audit risk, etc. Prerequisite: Permission of Doctoral advisor in Accounting.

ACG 7836 Seminar: Behavioral Research in Accounting-Individual Behavior (AC) (3). An in-depth examination of the relationship of cognitive psychology, cognitive models of human judgment, decision theory and accounting information. Emphasis is placed upon the human processing of accounting information, the decision value of information, and the development of decision aids or heuristics. Prerequisite: Permission of Doctoral advisor in Accounting.

ACG 7837 Seminar: Behavioral Research in Accounting-Human Groups and Systems (AC) (3). The multifarious behavioral relationships of groups within the formal and informal organizational structure are examined with respect to performance measurement (efficiency and effectiveness), accountability, planning and control of the development of decision support systems. Prerequisite: Permission of Doctoral advisor in Accounting.

ACG 7886 Seminar: Empirical Research Methodology and Paradigms in Accounting (AC) (3). Study of research design, methods of data collection and analysis and problems of measurement in accounting research. Empirical research studies in accounting are integrated throughout to illustrate and analyze the structural problems of research design as well as the strengths and weaknesses of various acceptable paradigms. Prerequisite: Permission of Doctoral advisor in Accounting.

ACG 7887 Research Forum and Workshop (AC) (1). Regularly scheduled workshop at which visiting scholars as well as faculty and doctoral candidates present and evaluate research papers. Candidates are expected to participate in discussions, act as discussants and present their own research for critique. Sessions are held for structuring and

brainstorming research projects in the formative stages as well as for presenting completed efforts. Prerequisite: Permission of Doctoral advisor in Accounting.

ACG 7888 Seminar: The Philosophy of Science, Theory Construction, and Verification in Accounting (AC) (3). An examination of knowledge, theories, scientific explanation and prediction as related to the social sciences. Various theories of accounting are critically examined from the standpoint of theory construction and verification in the philosophy of science. Prerequisite: Permission of Doctoral advisor in Accounting.

ACG 7889 Seminar: Positive Theory Research in Accounting (AC) (3). Construction of theory to explain accounting and auditing practices in an environment of regulation using empirical research findings from a growing body of economic-based research in accounting and finance. Prerequisite: Permission of Doctoral advisor in Accounting.

ACG 7896 Accounting Research Methods on Capital Markets. (AC) (3). An advanced accounting graduate course in current time series methods used to analyze capitals and other time-related financial markets. This course is designed for Ph.D. students in accounting and business who already have advanced statistical and financial training, and serves as an introduction to other doctoral courses. Prerequisite: Permission of Ph.D. advisor.

ACG 7938 Seminar: Special Topics in Accounting Research (AC) (3). Topics vary according to instructor and student interest in problems and issues on the frontier issues of accounting. Prerequisite: Permission of Doctoral advisor in Accounting.

BUL 5661 Law for Accountants (AC) (3). A survey of select topics of direct interest to accounting students, including contracts, sales, agencies, partnerships, corporations. Prerequisite: Permission of Accounting certificate program advisor.

BUL 5662 Accountant's Liability (AC) (3). Overview of accountant exposure to private and public sector liability suits, independent in auditor engagements, securities regulations and other state and federal laws of chief concern to accountants. Prerequisite: Permission of Accounting certificate program advisor.

BUL 6810 Legal Environment of Business (AC) (3). Studies the importance of law and legal institutions on commerce workings of administrative law; various aspects of employment legislation and other areas of legal environment of business. Prerequisite: Permission of accounting certificate program advisor.

BUL 6651 Special Topics in Business Law (AC) (1-6). Intensive study for groups of students of a particular topic, or a limited number of topics, not otherwise offered in the curriculum. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

BUL 6830 Survey of Business Law (AC) (3). Overview of substantive and procedural aspects of contract law, U.C.C., partnerships and corporations, accountant's liability, and other aspects of government regulation of business. Prerequisite: Admission to a graduate program in the School of Accounting, or permission of the School Director. Not open to those with undergraduate accounting degrees.

BUL 6831 Business Law II (AC) (3). Substantive issues and principles of law including agency, partnership and corporation law, commercial paper, antitrust, employment, administrative, environmental and computer law; ethical issues in business law. (F,S,SS)

BUL 6850 International Business Law (AC) (3). Analysis of legal problems facing the U.S. international and multinational businesses. Topics include the transnational research of economic regulation, international trade and investment, antitrust law, technology transfers, and securities law. (F,SS)

BUL 6906 Independent Study in Business Law (AC) (1-6). Individual conferences; supervised readings; reports on personal investigations. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

COP 7545 File and Database Management Systems (DS) (3). Fundamentals of database concepts and methodologies, including data representation, data modeling, and file organization. Prerequisite: Graduate standing. (on demand)

ECP 6705 Managerial Economics (EC) (3). Basic microeconomic concepts as they apply to decision making within the organization; supply and demand; market structure and market behavior in specific industries. Prerequisites: ECO 3021 and ECO 3011. (F,S,SS)

ECP 6715 Macroeconomic Forecasting for Management (EC) (3). Business macroeconomic concepts as they apply to decision making within the firm. Traditional models of income determination and forecasting analysis. Prerequisite: ECP 6705. (F,S,SS)

FIN 5418 Working Capital Management (FI) (3). Intermediate theories and techniques of cash, accounts receivable, inventory, and accounts payable management. Prerequisite: FIN 3414 or FIN 6456. (on demand)

FIN 5495 Leasing and Mergers (FI) (3). Discussion-oriented course; will provide an analytical foundation to corporate development, strategies, and resource allocation decisions. Merger activity and leasing decisions will be viewed as strategic decisions by the firm to enable them to achieve corporate objectives. Prerequisite: FIN 3414 or FIN 6456, or equivalent. (on demand)

FIN 6246 Financial Markets and Institutions (FI) (3). Analysis of the characteristics and efficiency of the money markets and capital markets. Types of money market and capital market instruments, and the role of financial institutions in these markets. Prerequisite: FIN 6428 (F,S,SS)

FIN 6315 Commercial Banking (FI) (3). The objectives, constraints, and policies applicable to the management of commercial banks. Emphasis will be given to asset and liability management, marketing of services and other banking functions. Prerequisite: FIN 6428. (F)

FIN 6325 Current Issues in Commercial Banking (FI) (3). Main policy issues in commercial banking and the role of regulatory authorities. Presentation includes bank mergers and holding companies; national bank branching; and the present structure and prospects of the financial sector. Prerequisite: FIN 6315 or equivalent. (on demand)

FIN 6346 Credit Analysis (FI) (3). This course examines how the accounting framework is integrated with tools and techniques for the analysis and interpretation of financial state-

ments. Evaluation of risk in domestic and foreign loans and the pricing of credit facilities. Prerequisite: FIN 6428. (S)

FIN 6426 Financial Management Policies (FI) (3). The selection and management of current and permanent assets to achieve corporate objectives. The selection and management of alternative sources of funds to obtain the optimal capital structure. Prerequisite: FIN 6428 or equivalent. (on demand)

FIN 6428 Financial Management (FI) (3). In-depth examination of asset, liability and capital structure management, with emphasis on capital budgeting techniques; risk evaluation; working capital management; and methods of short-term, intermediate and long-term financing. Prerequisite: ACG 6026 or equivalent. (F,S,SS)

FIN 6436 Capital Budgeting and Long Term Resource Allocation (FI) (3). The theory of capital allocation at the level of the firm, and empirical findings. Decision models and their application. The pattern of capital expenditure of industries and of the economy as a whole. Investment determinants. Prerequisite: FIN 6456 or equivalent. (F)

FIN 6446 Competitive Strategy (FI) (3). Provision of tools for managerial decision-making in a variety of competitive environments including demand analysis, short- and long-run costs of production, demand for factors, market structure and competitive strategy. Prerequisite: FIN 6456. (S)

FIN 6455 Financial Modeling and Forecasting (FI) (3). An introduction to Financial Modeling and Forecasting. Emphasis is on computer models and forecasting the financial variables. Prerequisite: Permission of instructor and FIN 6456. (on demand)

FIN 6456 Quantitative Methods in Financial Analysis (FI) (3). The applications of computer techniques to financial management of manufacturing firms and financial institutions. Prerequisite: FIN 6428 or equivalent. (F,S,SS)

FIN 6487 Financial Risk Management - Financial Engineering (FI) (3). A survey of financial instruments used for financial risk management, including forwards, futures, options and swaps. Emphasis is on identification of financial risks and designing

optimal risk management program. Prerequisite: FIN 6456. (S)

FIN 6508 Financial Futures and Fixed Income Investments (FI) (3). An examination of the structure, uses, and strategies associated with financial futures markets. Hedging, speculative activity, and other risk-return procedures are discussed. Prerequisite: FIN 6456 or equivalent. (F)

FIN 6516 Securities Analysis (FI) (3). An analysis of contemporary securities markets and their operations. The determinants of the risk-reward structure of equity and debt securities. Prerequisite: FIN 6456 or equivalent. (F,S,SS)

FIN 6525 Portfolio Management (FI) (3). Financial theories will be applied to the construction of portfolios. Portfolio management techniques will be analyzed in regard to the goals of individuals, corporations, and various financial institutions. Prerequisite: FIN 6516 or equivalent. (F)

FIN 6625 International Bank Management (FI, MA) (3). Management of the international banking function; setting goals and developing strategies, establishing an organizational structure and managing operations. International banking services. Foreign lending, risks, restraints, and portfolio considerations. International banking trends and implications for regulation. (S)

FIN 6626 International Bank Lending Policies and Practices (FI, MA) (3). Organization of the lending function and examination of the basic types of international lending; trade financing, loans or placements to foreign banks, loans to governments and official institutions, and loans to businesses. Syndicated bank loans. Documentation and legal considerations in foreign lending. Assessing and managing risk in the international loan portfolio. (on demand)

FIN 6636 International Finance (FI, MA) (3). A comparative study of the institutional characteristics and internal efficiency of developed and under-developed capital markets. The relationships between world and capital markets and prospects for integration. The role of multilateral institutions, multinational corporations, states, and the structure of trade in the international short and long term capital flows. The development of financial centers. Prerequisite: FIN 6428 or equivalent. (F,S,SS)

FIN 6804 The Theory of Finance (FI) (3). The study of the development of the theory of finance and its implications for the financial decisions made by the manager of business firms. Topics include: utility theory; capital budgeting; portfolio theory; capital market equilibrium; multi-period valuation; and the cost of capital. Financial decision making is explored under both certainty and uncertainty and within the context of both perfect and imperfect markets. Prerequisite: FIN 6456 or equivalent. (S)

FIN 6906 Independent Study in Finance (FI) (1-6). Individual conferences; supervised readings; reports on personal investigations. Consent of faculty tutor and Department Chairperson required. (F,S,SS)

FIN 6915 Master's Project in Finance (FI) (1-6). An individualized research project and report, which may include field experience with a firm or agency; library research; computer programming; or project development. The course should be taken during the last half of the student's graduate program. Consent of faculty tutor and Department Chairperson required. (F,S,SS)

FIN 6936 Special Topics in Finance (FI) (1-3). For groups of students who desire intensive study of a particular topic or a limited number of topics not otherwise offered in the curriculum. Consent of faculty supervisor and Department Chairperson required. (F,S,SS)

FIN 7507 Seminar in Futures Markets (FI) (3). A comprehensive examination of the literature in futures markets. Emphasizes the structure and pricing of futures, and risk-management via hedging and arbitrage. Prerequisite: Permission of instructor. (on demand)

FIN 7528 Seminar in Investments (FI) (3). Examines analysis and measurement problems of investments. Includes the application of statistical techniques, current theoretical issues and empirical literature. Prerequisite: Permission of instructor. (on demand)

FIN 7606 International Corporate Finance (FI) (3). The study of topics of research interest to international financial decisions. Topics include foreign exchange risk, international financial markets, and foreign exchange market efficiency. Prerequisite: Permission of instructor. (on demand)

FIN 7807 Seminar in Corporate Finance (FI) (3). Familiarizes students with recent developments in finance theory. Includes such topics as the influence of leverage, uncertainty and the cost of capital, agency theory and related topics. Prerequisite: Permission of instructor. (on demand)

FIN 7808 Financial Theory I (FI) (3). This course focuses on the theory of financial decision-making under certainty and risk. Includes investment under uncertainty, capital structure, dividend, asset valuation, and options pricing. Prerequisite: Permission of instructor. (on demand)

FIN 7809 Financial Theory II (FI) (3). This course focuses on the theory of financial decision-making under certainty and risk. Includes investment under uncertainty, capital structure, dividend, asset valuation, and options pricing. Prerequisite: Permission of instructor. (on demand)

FIN 7810 Financial Theory III (FI) (3). This sequel to Financial Theory I and II focuses on microfinance. Discusses issues primarily in corporate finance such as effects of taxation, agency theory, and signaling theory. Prerequisite: Permission of instructor. (on demand)

FIN 7811 Seminar in Financial Markets and Institutions (FI) (3). Examines recent developments in economic and financial theories as applied to topics such as the structure of financial markets and the economics of information and financial institutions. Prerequisite: Permission of instructor. (on demand)

FIN 7812 Seminar in Options and Contingent Claims (FI) (3). An examination of the theories of option valuation and arbitrage pricing, and their applications to security analysis, portfolio management and financial instrument valuation. Prerequisite: Permission of instructor. (on demand)

FIN 7816 Seminar in Portfolio Theory (FI) (3). Examines investment and portfolio theory, with emphasis on the historical development of the literature in this area and the recent analytical and empirical work. Prerequisite: Permission of instructor. (on demand)

FIN 7818 Foundations of Financial Models (FI) (3). Introduction to mathematical and economic models underlying the development of modern finance theory. Includes dis-

crete and continuous time models in finance using stochastic calculus. Prerequisite: Permission of instructor. (on demand)

FIN 7845 Statistical Methods in Finance I (FI) (3). Estimation, and testing of various economic and financial models. Emphasis on econometric techniques to deal with various problems of single-equation models and introduction to simultaneous equation. Prerequisite: Instructor's permission. (on demand)

FIN 7846 Statistical Methods in Finance II (FI) (3). Emphasis on econometric techniques and multivariate statistics as applied in finance. Includes simultaneous equation models, multiple discriminant analysis and factor analysis. Prerequisite: Instructor's permission. (on demand)

FIN 7855 Financial Economics I (FI) (3). An advance doctoral course covering selected advanced topics in Microeconomic foundations and other topics related to business. Emphasis will be on economics of uncertainty, agency problems, information and signaling. Prerequisite: ECO 7115 or Permission of instructor. (on demand)

FIN 7856 Financial Economics II (FI) (3). An advanced doctoral course covering selected advanced topics in the theory of macrofinance. Emphasis will be on financial intermediation. Prerequisite: ECO 7206 or Permission of instructor. (on demand)

GEB 7906 Independent Study for Doctoral Students (1-15). Supervised research projects determined by professor and student. May involve conferences, supervised reading, and reports. Consent of sponsoring professor and chairperson required. (on demand)

GEB 7916 Doctoral Research Project in Business (BA) (1-15). Intensive research project conducted after the first tier of coursework is complete. Conducted on an individual basis under the supervision of a faculty member. Prerequisite: Graduate standing. (on demand)

GEB 7936 Doctoral Seminar in Business Administration (BA) (1). Weekly informal seminars to discuss current issues, educational approaches, and career management for Ph.D. students in Business Administration. (on demand)

GEB 7980 Doctoral Dissertation in Business Administration (BA) (1-15). Original research that is supervised by a faculty committee and defended openly before the university committee. Prerequisite: Admission to Candidacy. (on demand)

GEB 7981 Dissertation Preparation (1-10). Preparatory background research and study to begin development of dissertation proposal. Students should be able to complete proposal by the end of the course. Prerequisite: Completion of TIER 1 courses. (on demand)

ISM 6045 Current Economic and Social Implications of Information Systems (DS) (3). Effects and implications of socioeconomic factors in the operation of information systems and interdependence with the legal and international business environment. Privacy and fraud; computer system purchase and lease contracts; economics of system design, selection and operation; electronic fund transfers and mail; international considerations. Prerequisites: MAN 6830 and MAN 3025. (S)

ISM 6106 Systems Analysis (DS) (3). A study of the systems approach to problem solving as it applies to any area of specialization. Consideration of the problems in determining system objectives; identifying system boundaries and constraints; marshaling resources for achieving system objectives; analyzing the sub-components of the system and their respective objectives; and managing the system. Prerequisites: MAN 6830, CGS 3403, and COP 2210. (F)

ISM 6155 Information Systems Development (DS) (3). Concepts and methods used in the analysis and design of MIS. Feasibility study, system flow charting, data requirements analysis, data design, user friendly systems design. Systems design project. Prerequisite: MAN 6830. (F)

ISM 6205 Database Management (DS) (3). The course addresses techniques for structuring and managing data in organizations. Discusses data concepts, data modeling, database requirements definition, conceptual, logical, and physical design, data administration, and distributed database management. Prerequisite: MAN 6830. (S)

ISM 6225 Global Applications of Information Technology (3). Examines information technology use in the in-

ternational arena, e.g. for communication within a multinational corporation, or communication with customers, suppliers in another country. Topics include: transborder data flow; global connectivity through Telecommunications; IT transfer across national boundaries, management of IT in multinational corporations; case studies or global IT use. Prerequisite: MAN 6830.

ISM 6305 Information Systems Planning (DS) (3). An in-depth study of systems concepts, as they apply to information systems in organizations. Consideration of planning for systems development and its accomplishment through the phases of the life cycle, and of the overall management of the information systems function. Prerequisites: MAN 6830 and MAN 3025. (S)

ISM 6357 Computer Administration (DS) (3). The theory and computer management. Topics include selection, training, job and performance evaluation, and incentive schemes as they relate to key positions of systems analysis, programming, data preparation and entry, and project management. Special attention is given to human resources management and development at various levels within the EDP department. (S)

ISM 6405 Management Support Systems (DS) (3). Concept of decision support is examined in a management decision context. Types of applied decision support and expert systems in business are surveyed. Prerequisite: MAN 6830. (F)

ISM 6455 Microcomputer Applications in Business (DS) (3). Fundamentals and comparison of contemporary microcomputers. Extensive usage of available software for making business decisions. Emphasis on small business applications and cases. Student projects. Prerequisites: Computer programming proficiency, MAN 4504 and CGS 3300 or MAN 6501 and 6830. (S)

ISM 6930 Special Topics in Management Information Systems (DS) (1-6). To study the recent developments in the MIS field not otherwise offered in the curriculum, such as office automation, computer graphics, etc. Prerequisites: Advanced standing and department chairman approval.

ISM 7083 Deterministic Decision Models (DS) (3). This course deals with the optimal decision making and modeling of deterministic systems that originate from real life.

These applications, which occur in government, business, engineering, economics, and the natural and social sciences, are largely characterized by the need to allocate limited resources. (S)

ISM 7087 Probabilistic Decision Models (DS) (3). This course deals with the optimal decision making and modeling of probabilistic systems that originate from real life. These applications, which occur in government, business, engineering, economics, and the natural and social sciences, are largely characterized by the need to allocate limited resources. (F)

ISM 7126 Systems Analysis and Design (DS) (3). The process of analyzing information requirements and the design and implementation of software systems. Emphasis on the theoretical foundations of different systems development techniques. (F)

ISM 7152 Seminar on System Implementation (DS) (3). Theory and research on the implementation of information systems in organizational settings. Theories of technological innovation and political action applied in the design and development of systems within organizations. (F)

ISM 7306 Seminar on Managing Information Resources (DS) (3). Theory and research on the managerial viewpoint on information processing functions within an organization. Relationship of information management to strategic planning and other business functions.

ISM 7345 Organizational Impacts of Information Systems (DS) (3). Analysis of theory and research on the impacts of information systems on human behavior in organizations and upon organizational design. (F)

ISM 7406 Decision Support Systems (DS) (3). Theory and research on the design of decision aids. Integrating models and data with a technological delivery system that supports unstructured problem-solving by executive. (S)

MAN 5524 Advanced Production Management (DS) (3). More advanced methods in master planning, forecasting, capacity management, production activity scheduling/control, MRP and inventory management. This course has a professional orientation similar to the APICS certification guidelines. Prerequisite: MAN 4504 or MAN 6501, or

Department Chairperson's approval. (S)

MAN 5930 Seminar in Personnel Management (MA) (3). Overview and examination of the various aspects of the personnel management function. (F)

MAN 6051 Organization and Management Process (MA) (3). Analysis of organizations including the evolution of management thought and the effects of technology and the environment on the organization. Emphasis will be on such concepts as division of work, delegation and decentralization, leadership, motivation, work satisfaction; as well as planning, organizing, directing, and controlling. (F)

MAN 6066 Business Ethics (ME) (3). Practical approaches for addressing ethical conflicts in organizational administration. Emphasis will be placed on developing participants' ability to accurately diagnose organizational ethics problems and determine constructive solutions.

MAN 6121 Interpersonal Behavior and Analysis (MA) (3). A human interaction/human relations training laboratory, designed to increase both self-awareness and understanding of behavior dynamics in groups. Course is intended to enable students to broaden their conceptual understanding of human interpersonal communications and conflict. (S)

MAN 6145 Intuition in Management (MA) (3). Interdisciplinary study of intuition and its applications in management. Apply learnings in a term project. Prepare Intuitive Experience Logs to discover intuition firsthand. Prerequisite: Computer Competency. (F)

MAN 6204 Organization and Management Theory (MA) (3). Analysis and design of the structure and process of complex organizations. Effects of task uncertainty, growth, power, goals, and information technology on organization structure and control. (F,S)

MAN 6245 Organizational Behavior (MA) (3). Individual, interpersonal, and small group behavior in complex organizations. Focus on behavior, its causes, and management interventions to improve organizational effectiveness. Research methods to study organizational behavior. (F,S,SS)

MAN 6265 Group Processes in Organizations (MA) (3). The social and psychological processes of organizational functioning. The roles played by small groups in organizational settings. (S)

MAN 6295 Conflict in Organizations (MA) (3). A critical examination of the role and impact of interpersonal and intergroup conflict in organizations. Models as approaches to utilizing and resolving conflict toward constructive personal and organizational ends will be emphasized. (F)

MAN 6311 Advanced Personnel Management (MA) (3). Attention is focused on the theory and practice of modern personnel management, as related to other management functions. Topics include selection; training; job and performance evaluation; and incentive schemes. Special attention is given to human resources management and development at various organizational levels. (F)

MAN 6321 Personnel Selection and Placement (MA) (3). Individual differences and their measurement in personnel selection and job placement. Job design and redesign. (S)

MAN 6331 Compensation Administration (MA) (3). An in-depth analysis of Wages and salary administration, including such topics as job evaluation; wage incentive systems; and work sampling. (SS)

MAN 6351 Personnel Training and Development (MA) (3). Determining training needs. Training methods. The training staff. Supervisor development. Equal Employment Opportunity management. (F)

MAN 6405 Labor Relations (MA) (3). Examines the collective bargaining system in the United States from the viewpoint of the practitioner. Various aspects of the environment, structure, processes, issues and impact of collective bargaining are considered. Special attention is given to the negotiation and administration of agreements. (S)

MAN 6411 Collective Bargaining Topics (MA) (3). An advanced course in labor relations for students with some background who desire more depth than that provided in introductory courses. Topics of contemporary interest, such as public sector collective negotiations, are treated at length. (SS)

MAN 6416 Corporate Negotiations (MA) (3). An examination and analysis of corporate negotiation strategies in such areas as collective bargaining, mergers, joint ventures, and with government regulation agencies. The legal environment affecting the negotiated process will be closely scrutinized, as well as internal and external political processes. Prerequisites: ACG 6026, MAN 6245, FIN 6428, MAR 6805. (F,S)

MAN 6501 Operations Management (DS) (3). This course covers analysis, design, and operations of organizational systems. The systems approach is used to provide a framework or general model of analysis, to which specific concepts, quantitative techniques, and tools can be related. The material presented has application to any organization of people and machines, including hospitals, governmental agencies, service organizations, and industrial concerns. Prerequisite: MAN 6569. (F,S)

MAN 6525 Managing for Total Quality (3). Addresses underlying management assumptions, methods, tools, culture and philosophy of total quality management - TQM. (F)

MAN 6529 Seminar in Production Control Systems (DS) (3). The control systems for production operations automation and its impact on organizations. Integrated operational-simulation approach. Group and individual projects.

MAN 6559 Seminar in Management Science (DS) (3). New topics application areas will be explored. Lectures will relate to the latest advances in the theory and application of management science. Prerequisite: Instructor's approval. (S)

MAN 6569 Managerial Decision-Making (DS) (3). This course will investigate and analyze the decision-making problems that managers face in business, volunteer organizations, government, and the public sector. Emphasis will be placed on providing a variety of decision-making experiences for the student. Prerequisite: QMB 6603 or equivalent. (F,S)

MAN 6585 Productivity Management Seminar (DS) (3). Analysis of productivity in manufacturing and service organizations and methodology for productivity improvement. Extensive cases, projects, tours, and guests speakers. Prerequisite: Gradu-

ate students (or CBA certificate students). (F)

MAN 6601 International Management (MA) (3). Graduate seminar focusing on management issues confronting the multinational enterprise. Includes basic trade theory; tariffs and trade barriers; organizational transfer, foreign exchange; international financial management; export-import procedures; comparative business customs; personnel management; and institutions affecting the multinational manager. (F,S,SS)

MAN 6603 Problems in Comparative Management (MA) (3). Discussion of literature, readings, and cases, aimed at underscoring the differences and similarities in management behavior in different countries and cultures. General instruction in obtaining and utilizing comparative data on management differences. (F)

MAN 6606 International Business Environment (ME, MA) (3). A macro-examination of economic, political, and cultural variables affecting the organization. Emphasis will be placed on social indications and societal forecasting of change; organizational responses to change; and the nature and rate of change in different societies.

MAN 6608 International Business (MA) (3). International variables as they affect managers. Theoretical constructs and their application to specific problems in international business. (F,S,SS)

MAN 6615 International Labor-Management Relations (MA) (3). Comparative analysis of selected industrial relations systems and impact on multinational firms and international labor movements. Emphasis on empirical models and management-oriented case studies. (S)

MAN 6617 Managing Global Production and Technology (MA) (3). An exploration of the management of technology and its relationship to the dynamics of globalization of production in both manufacturing and service industries. Prerequisite: MAN 6608. (F)

MAN 6635 International Business Policy (MA) (3). An analysis of corporate strategies in a rapidly developing and changing world environment. Emphasis will be placed on forecasting, planning, and con-

tingency strategies. The course is taught by case method and stresses the environmental and institutional constraints on decision making within the organization. Corporate executives are invited to attend whenever possible. Prerequisites: ACG 6026, MAN 6245, FIN 6428, and MAR 6805 and Man 6603 or Man 6608. (F)

MAN 6675 Special Topics in International Business (MA) (3). For groups of students who wish to study intensively a particular topic, or a limited number of topics, in international business, not offered elsewhere in the curriculum. Prerequisites: Approval of the faculty advisor, Department Chairperson, and Dean. (F,S,SS)

MAN 6679 Master's Project in International Business (MA) (3). An individual research project on an international business problem, which may include field work (including internship), library research, computer modeling, or the use of an approved research methodology. Prerequisites: Assignment of faculty advisor and permission of Department Chairperson. (F,S,SS)

MAN 6695 Independent Study in Business (MA) (3). Individual conferences; supervised readings; reports on personal investigations. Prerequisites: Assignment of faculty tutor and written permission of Department Chairperson, and Dean.

MAN 6715 Business Environment and Public Policy (ME) (3). An examination of the economic, political, social and moral context in which management decisions are made. The focus is on the public policy environment of business, whereby community direction is transformed into corporate behavior.

MAN 6726 Strategic Management (MA) (3). The use of cases, guest lectures, and gaming to integrate the analysis and measurement tools, the functional areas and public policy issues. The objective is to develop skill in broad areas of rational decision-making in an administrative context of uncertainty. Should be taken in the last semester of master's program. (F,S,SS)

MAN 6805 Entrepreneurship (MA) (3). A discussion of the general theories, principles, concepts and practices of entrepreneurship. Heavy emphasis is placed on lecture, readings, case studies and group projects. (F)

MAN 6830 Organization Information Systems (DS) (3). Introduction to information systems and their role in organizations from a user's viewpoint. Survey and application of the basic concepts necessary for understanding information systems. Study of the main activities in the development cycle used to acquire information systems capability.

MAN 6830L Organization Information Systems Laboratory (DS) (1). Laboratory applications for MAN 6830.

MAN 6908 Independent Study in Business Environment (3). Independent project in the political, economic, social, cultural, ethical, or governmental relations environment of business. Directed study with a business environment faculty member. Prerequisites: MAN 6715, MAN 6606 and permission of instructor.

MAN 6910 Research Methods in Management (MA) (3). Covers the research methods and analytical techniques most widely used in research in human resources and general management. Emphasis is on helping students to become more aware of current techniques and their applications. (S)

MAN 6911 Research in Systems Development (DS) (3). Conduct an individual research project or thesis on a topic in the area of computer personnel, systems analysis and design, or other areas within the framework of the MIS program, subject to the instructor's approval. Prerequisite: ISM 6155.

MAN 6930 Masler's Seminar in Management (MA) (1-3). An examination of recent research findings in selected areas of current concern. Emphasis is placed on readings; active discussion; and small, short-term action and research projects. The student may make a preliminary selection of his/her master's thesis or project topic. Prerequisites: Consent of faculty sponsor, Department Chairperson, and Dean. (F,S,SS)

MAN 6937 Special Topics in Business Environment (3). A review of a contemporary dimension of business' environment in a field of faculty specialization. Prerequisites: MAN 6523, MAN 6606 or equivalent.

MAN 6974 Masler's Project in Management (MA) (1-6). Each student is required to develop and conduct an individual research project or thesis on a topic of interest. The topic

will be chosen in consultation with a faculty member in the College. (SS)

MAN 7146 Leadership I (MA) (3). Course identifies leadership theories and research bearing on modern management practice. Behavioral, situational and transformational theories of leadership are emphasized, compared and evaluated. (F)

MAN 7147 Leadership II (MA) (3). Draws on research and case studies for understanding of adaptive leadership in turbulent, uncertain environments. Emphasis on effective management of innovation, entrepreneurial activity and new ventures. (S)

MAN 7148 Intuition in Management (3). In-depth study of the nature and development of the intuitive process emphasizing its role in management decision making and its relationship to rational problem solving. Prerequisite: Permission of instructor. Corequisite: MAN 7148L. (S)

MAN 7148L Intuition in Management Lab (1). Exercises and practices for developing intuition. Assessment and measurement of intuitive styles. Audio visual presentations on various topics in intuition. Prerequisite: Permission of instructor. Corequisite: MAN 7148. (S)

MAN 7155 Fundamentals of Behavioral Research (MA) (3). Analytical tools to conduct systematic research. Methods of data collection in lab, survey and field research. Emphasis on principles of measurement and statistics to interpret/report behavioral data. (F)

MAN 7206 Organizational Analysis (MA) (3). Develops skills in organizational problem-solving through applications of theory and research to actual problems. Emphasis on needs analysis, process consultation, team-building and action research. (S)

MAN 7207 Theories of Organization (MA) (3). Organization functioning from a macro perspective; emphasis on evolution, structure, design and processes of complex systems. Study of communication/information networks, inter-group processes and control strategies. (F)

MAN 7235 Management Philosophy and Strategy (MA) (3). Compares various cross-cultural management philosophies to structure and function of different types of organizations. Emphasis on how to develop

and implement a management strategy for maximum productivity in different organizations. (S)

MAN 7275 Organizational Behavior Management (MA) (3). An introduction to the study of human behavior in organizations. Emphasis is given to management of individual and group processes including conflict attitudes, decision making, motivation and stress. (F)

MAN 7305 Human Resource Management (MA) (3). Personnel management topics including personnel selection, performance appraisal, training design, employee development, and compensation administration. Legal and practical issues are emphasized. (S)

MAN 7412 Labor-Management Topics (MA) (3). Presents various aspects of the labor-management relationship to provide a contemporary perspective. Emphasis on structure, processes, strategies and legal issues in collective negotiation and industrial relations. (F)

MAN 7529 Seminar in Operations Management (DS) (3). Concepts, tools and recent research developments in the design, planning and control of operations management systems in business and service organizations. Prerequisite: ISM 7083. Corequisite: ISM 7084.

MAN 7609 Comparative Management (MA) (3). Course focus is cross-cultural management, i.e., how cultural values influence managerial behavior. The problems of cross-cultural communications, leadership, motivation, and decision making are examined. Prerequisites: Admission to Doctoral program and completion of doctoral core. (S)

MAN 7616 Multinational Firm Global Strategy (MA) (3). Overview of the strategic management and international business concepts that frame strategic activity in MNCs. Competitive business strategies in global and multidomestic industries. Prerequisite: Completion of business Ph.D. core. (F)

MAN 7620 International Business Operations I (MA) (3). Examination of the functional management, operations and concerns of international businesses. Emphasizes analysis of problems in managing joint ventures, licensing, barter, and technology transfer. Prerequisites: Admission to Doctoral program and completion of doctoral core. (F)

MAN 7621 International Business Operations II (MA) (3). Focus on political, economic, and national security issues which influence IB operations or strategies. Examines techniques for political and economic risk, assessment and reactions to such influences. Prerequisites: Admission to Doctoral program and completion of doctoral core. (S)

MAN 7640 International Business Research Methods (MA) (3). Overview of IB academic research, emphasizing topics, literature, methods, information sources, applications, problems, and journal characteristics. Prerequisites: Admission to business Doctoral program and completion of doctoral core. (F)

MAN 7718 Analysis of Corporate Policy Methods (MA) (3). Links functional areas of management to provide integrated view of organization and public policy. Emphasis on measurement, analysis and conceptualization of organization as a totality of operations. (F)

MAN 7895 Seminar in Management (MA) (3). Key concepts in management ranging from individual worker styles to business ethics. Emphasis on topics such as men and women in organization, decision making styles, and attribution management. (S)

MAN 7910 Advanced Management Research (MA) (3). Covers applications of analytical methods in contemporary management research. Emphasis is given to complex research design strategies including multivariate techniques and multidimensional scaling. (S)

MAR 6075 Current Issues in Marketing I (ME) (3). Intensive study of various topic areas in marketing. Course emphasizes student reading and research, with oral and written reports. Students electing to take this seminar may take no more than 3 credit hours of independent study in marketing. Prerequisite: MAR 6805.

MAR 6158 International Marketing (ME) (3). This course discusses the nature and scope of international marketing, and explores problems facing multinational firms and other international marketing organizations, together with strategies for foreign market penetration. Prerequisite: MAR 6805. (F,S)

MAR 6336 Advanced Promotional Strategy (ME) (3). The course focuses on planning, problem-solving, and decision-making, as they apply

to promotion programs. Primary emphasis is on advertising, with discussion of the role of promotion in relation to other elements of the marketing program. Prerequisite: MAR 6805. (S)

MAR 6406 Advanced Sales Management (ME) (3). Analysis of personal selling's roles in marketing strategy using detailed case studies on field sales management, working with channel organization, and planning and controlling sales operations. Prerequisite: MAR 6805. (S)

MAR 6506 Advanced Consumer Behavior (ME) (3). Modern comprehensive models of consumer behavior are utilized as a framework for understanding consumer decision processes. Prerequisite: MAR 6805. (F)

MAR 6646 Advanced Marketing Research (ME) (3). The role of research in providing information for marketing decision-making, including an examination of the research process and the tools available to the researcher. Prerequisite: MAR 6805 or permission of instructor. (F)

MAR 6707 Current Issues in Marketing II (ME) (3). Students electing to take this seminar may not take independent study in marketing. Prerequisite: MAR 6075.

MAR 6805 Marketing Management (ME) (3). A study of analysis and application of theory and problem solving in marketing management. Emphasis will be on the role of marketing in the organization; planning the marketing effort; management of the marketing organization; control of marketing operations; and evaluation of the marketing contribution. (F,S,SS)

MAR 6816 Strategic Marketing Management (ME) (3). Course emphasis is on application and integration of concepts and tools, through participation in the marketing management of a firm in competition with other firms. The course's focal point is a computerized marketing management simulation. Prerequisite: MAR 6805 or equivalent. (F,S)

MAR 6915 Independent Study in Marketing (ME) (1-6). Individual conferences; supervised reading; reports on personal investigations. Consent of faculty tutor, Department Chairperson and Dean required.

MAR 6936 Special Topics in Marketing (ME) (1-6). For groups of students

desiring intensive study of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and Department Chairperson required.

MAR 7246 Seminar in International Marketing (ME) (3). Analyzes distinctive characteristics and trends in foreign markets. Explores alternative international marketing strategies, considering critical environmental differences among countries.

MAR 7507 Seminar in Consumer Behavior (3). Covers the major topics and theoretical perspectives within the research literature addressing consumer behavior. Heavy emphasis on consumer decision making.

MAR 7622 Marketing Research Methodology I (ME) (3). Philosophy, concepts, methods of marketing research design. Experimental methods, sampling procedures, measurement techniques, other methodological considerations. Prerequisites: Successful completion of first year research methods requirements in a College of Business Ph.D. Program or permission of instructor.

MAR 7623 Seminar in Marketing Environment (ME) (3). Examines the dynamic interaction between marketing management and the corporate environment. Encourages development of an ability to design and implement effective marketing strategies.

MAR 7652 Seminar in Advertising and Persuasion (3). Covers the major topics and theoretical perspectives within the research literature addressing persuasive communications.

MAR 7667 Seminar in Marketing Management (ME) (3). Analytical approaches to strategic and tactical marketing and public policy decisions. Emphasis is on relevant concepts from behavioral sciences as applied to marketing decisions.

MAR 7786 Seminar in Marketing Theory (ME) (3). Intensive analysis of the nature and role of hypotheses, generalizations, and empirical regularities. Critical examination of theories of marketing and interaction of marketing theory and practice.

MAR 7815 Seminar in Foundations of Marketing Thought (ME) (3). Foundations of marketing, interdisciplinary relationships, reviews major research areas, the marketing mix, consumer

choice models, segmentation, stochastic, and analytical models.

MAR 7845 Seminar in Services Marketing (ME) (3). Analyzes the nexus between services and marketing management. Identifies and appraises alternative corporate strategies within industries such as banking and finance, insurance, hospitality, entertainment and leisure, health care, and education.

MAR 7875 Sectorial Marketing (MA) (3). Course includes retailing, wholesaling, pricing, distribution, advertising, sales promotion and management, personal selling, international services and macromarketing; and marketing and economic development.

MAR 7979 Doctoral Research in Marketing (ME) (1-6). Research while enrolled for a doctoral degree under the direction of faculty members. Prerequisite: Permission of Department.

QMB 6603 Quantitative Methods in Management (DS) (3). Introduction to basic quantitative tools for the analysis of problems arising in the management of organizations, and the application of these tools to real-life problems. Prerequisites: College Algebra and completion of the Computer Programming Proficiency requirement. (F,S,SS)

QMB 6805 Deterministic Models for Management Analysis (DS) (3). Applications of deterministic models such as linear and nonlinear programming, network analysis (PERT), dynamic programming, and branch and bound algorithms to managerial problems of allocation, planning, scheduling, investment, and control. (S)

QMB 6845 Simulation of Management Systems (DS) (3). Basic concepts of computer simulation of systems; application of these concepts to a variety of management problems. Industrial dynamics, urban dynamics, and large system simulation. Simulation in economic analysis, heuristic methods, and management games are covered. Prerequisites: MAN 6569 and a Computer Programming Language. (S)

QMB 6855 Stochastic Models for Management Analysis (DS) (3). Applications of probabilistic models (such as queuing, inventory, and renewal) to their managerial problems. (S)

QMB 6875 Stochastic Models for Project Management (DS) (3). Review of deterministic models and principles. Introduction to GERT, critical path methods, criticality index, and resource considerations in stochastic networks. Emphasis on operational decision-making, advanced topics, and individual projects. Students use the computer, and existing programs, to analyze hypothetical project networks, and learn to interpret the results in order to facilitate operational decisions. (F)

QMB 6905 Independent Study in Decision Sciences (DS) (1-6). Individual conferences; supervised readings; reports on personal investigations. Consent of instructor, Department Chairperson and Dean required. P/F only. (F,S,SS)

QMB 6934 Seminar in Decision Sciences (DS) (1-3). An examination of recent research findings in selected areas of current concern. Emphasis is placed on readings; active discussion; and small, short-term action and research projects. Consent of instructor required. (F,S,SS)

QMB 6974 Project in Decision Sciences (DS) (1-6). Each student is required to develop and conduct an individual research project or thesis on a topic of interest. The topic will be chosen in consultation with a faculty member in the College and approved by the Department Chairperson. (F,S,SS)

QMB 7935 Seminar in Decision Sciences (DS) (3). Critical review and analysis of recent and important research developments in the area of decision sciences. Prerequisites: ISM 7083 and ISM 7087. (S)

TAX 5066 Tax Research and Reporting (AC) (3). A study of tax planning aspects of a variety of business and other transactions. Emphasis will be placed upon perceiving tax issues and conducting research to resolve them. Prerequisite: Permission of Accounting certificate program advisor.

TAX 5106 Corporate Taxation (AC) (3). Tax implication of corporate formations, distributions, redemptions, liquidations, divisions, reorganizations, collapsibles, attributes, consolidations, S-Corp, AET and PHC's. Prerequisites: Permission of Accounting certificate program advisor.

Taxation of Estate and Gift (3). The study of the federal estate tax and federal gift tax provisions. Prereq-

quisites: Permission of Accounting Certificate program advisor.

TAX 5406 Taxation of Estates and Trusts (AC) (3). Study of income tax aspects of decedents, followed by income taxation of estates and trusts (subchapter J). Special emphasis on throw-back rules, grantor trusts, charitable remainder trusts, and foreign trusts. Prerequisite: Permission of Accounting certificate program advisor.

TAX 5506 International Dimensions of Taxation (AC) (3). Tax provisions affecting foreign corporations and non-resident aliens, as well as those tax provisions affecting U.S. person's business and investment activities outside the U.S. Prerequisite: Permission of Accounting certificate program advisor.

TAX 5725 Tax Planning for Managers (AC) (3). An exploration of the concepts of federal income taxation and tax planning, from the point of view of the manager. Prerequisites: ACG 6308 and permission of accounting certificate program advisor.

TAX 5875 Seminar in Taxation (AC) (3). An in-depth study of recent legislative, administrative, and judicial developments in taxation. Prerequisites: TAX 4001 or equivalent, and permission of Accounting certificate program advisor.

TAX 5904 Independent Study in Taxation (AC) (3). Individual conferences, supervised readings, reports on personal investigations. Prerequisite: Written permission of instructor, Accounting certificate program advisor, School director, and dean.

TAX 5936 Special Topics in Taxation (AC) (3). Intensive study for groups of students of a particular topic or topics not otherwise offered in the curriculum. Prerequisite: Written permission instructor, Accounting certificate program advisor, School director, and dean.

TAX 6005 Income Tax (AC) (3). A survey of federal income taxation, with emphasis on the taxation of individuals and corporations and the ethics of income tax accounting. Prerequisites: ACG 6115 and admission to a graduate program in the School of Accounting or permission of the School Director. Not open to those with undergraduate accounting degrees.

TAX 6015 Taxation of Corporations and Partnerships (AC) (3). An in-depth study of income taxation of corporations and partnerships, including tax planning. Prerequisite: TAX 4001 or equivalent with a grade of 'C' or higher and admission to a graduate program in the School of Accounting or permission of the School Director. (F,S,SS)

TAX 6065 Tax Research (AC) (3). An in-depth study and application of both traditional and computer-assisted tax research tools and of relevant practice and procedural mechanisms affecting taxation. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director. (F,S,SS)

TAX 6105 Taxation of Corporations I (AC) (3). The study of federal tax consequences of the formation and operation of corporations; distributions and redemptions; elections of Subchapter S status. Prerequisites: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director. (F,S,SS)

TAX 6115 Taxation of Corporations II (AC) (3). The study of federal tax consequences of the liquidation and reorganization of corporations; multiple corporations; advanced topics in corporate taxation. Prerequisites: TAX 6065 and TAX 6105, and admission to a graduate program in the School of Accounting or permission of the School Director. (SS)

TAX 6205 Partnership Taxation (AC) (3). The intensive study of the formation, operation, and dissolution of partnerships (general and limited). Prerequisites: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director. (F)

TAX 6405 Estate and Gift Taxation (AC) (3). The study of the federal estate tax and federal gift tax provisions. Prerequisites: TAX 6065, and admission to a graduate program in the School of Accounting or permission of the School Director. (F,S)

TAX 6415 Fiduciary Accounting and Taxation (AC) (3). The study of the income taxation of estates, trust, and the beneficiaries thereof, including the determination of distributable net income, and throwback rules. The grantor trust and income in respect of a decedent is emphasized. The use of trusts in tax and estate planning is also explored. Prerequisite:

quisites: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director. (F)

TAX 6445 Estate Planning (AC) (3). An in-depth discussion of the use of estate tax planning tools, such as lifetime gifts, life insurance, the marital deduction, the use of trusts, future interests, annuities, powers of appointment, charitable transfers, and post-mortem planning. Prerequisites: TAX 6405 and admission to a graduate program in the School of Accounting or permission of the School Director. (S)

TAX 6505 International Taxation I (AC) (3). Federal income tax provisions applicable to non-resident aliens and foreign corporations. Prerequisites: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director. (F)

TAX 6515 International Taxation II (AC) (3). Federal income tax provisions applicable to U.S. persons, business, and investment activities outside the U.S. Prerequisite: TAX 6505 and admission to a graduate program in the School of Accounting or permission of the School Director.

TAX 6726 Tax Planning for Managers (AC) (3). An exploration of the concepts of federal income taxation and tax planning, from the point of view of the manager. Prerequisites: ACG 6026 or equivalent and permission of Accounting advisor. Not open to M.S.T. or M.Acc. students.

TAX 6805 Tax Policy (AC) (3). A study of the tax accounting concepts and the judicial doctrines inherent in the federal tax law, tax planning, and tax policy. Prerequisite: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director.

TAX 6835 Taxation of Deferred Compensation (AC) (3). The taxation of qualified and non-qualified pension and profit-sharing plans, stock options, annuities, lump-sum distributions, death benefits, rollovers, self-employment plans, employee stock ownership plans, etc. Prerequisites: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director. (F)

TAX 6875 Current Developments in Taxation (AC) (3). The study of recent legislative, administrative and judicial developments in taxation. Prerequisites: TAX 6065 and at least four additional graduate tax courses and admission to a graduate program in the School of Accounting or permission of the School Director. (S,SS)

TAX 6876 Transactions in Property (AC) (3). An in-depth investigation into tax problems relating to basis, capital gains and losses, and non-recognition provisions for transactions in property with special emphasis on personal property transactions and securities investments. Prerequisites: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director. (S,SS)

TAX 6877 Seminar in Taxation (AC) (3). Intensive study of a particular topic or a limited number of topics. The topics included in this course will depend upon the availability of faculty with expertise in the following special classes of tax problems: advanced corporate taxation; taxation of not-for-profit institutions; interstate, state and local taxation; and others, as current developments demand. Prerequisites: TAX 6065 and TAX 6805 and admission to a graduate program in the School of Accounting or permission of the School Director.

TAX 6905 Independent Study in Taxation (AC) (1-3). Individual conferences, supervised readings; reports on personal investigations. Prerequisites: Admission to a graduate program in the School of Accounting or permission of the School Director

TAX 6935 Special Topics in Taxation (AC) (1-3). Intensive study for groups of students of a particular topic(s) not otherwise offered in the curriculum. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director

TAX 7067 Seminar: Special Topics in Taxation Research (AC) (3). Topics vary according to instructor and student interest in problems and issues on the frontier issues of taxation. Prerequisite: Permission of Doctoral advisor in Accounting

TAX 7815 Seminar: Tax Policy: An Analysis of the Issues (AC) (3). An in-depth examination of the horizontal and vertical equity issues in taxation,

the effects on income distribution, business decisions, foreign balance of payments, public finance issues, and economic policy. Emphasized are the areas of empirical research vis a vis legal research. Prerequisite: Permission of Doctoral advisor in Accounting.

TRA 5245 Transportation Logistics (ME) (3). Quantitative methods applied to solving problems in business logistics; mathematical and statistical models; optimization theory and simulation. Problems selected from areas of physical distribution management, inventory control, mode selection, and facility locations.

TRA 5401 Transportation Operations and Carrier Management (ME) (3). Contemporary management techniques as applied to carriers; management-problems peculiar to transportation firms; economic analysis of marketing problems; capital formation; costs; pricing; labor relations; and government regulation.

TRA 6015 Graduate Survey of Transportation Management (ME) (3). Graduate survey of transportation, its elements, and their impact on society. History, economics, and regulatory principles in transportation. Current policies and problems for all the major transportation modes.

TRA 6905 Independent Study in Transportation (ME) (1-6). Individual conferences; supervised readings; reports on personal investigations. Consent of faculty tutor, Department Chairperson, and Dean required.

TRA 6936 Special Topics in Transportation (ME) (1-6). For groups of students desiring intensive study of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and Department Chairperson required.

College of Business Administration

Dean	Harold E. Wyman
Associate Dean	Donald W. Fair
Associate Dean	Dana L. Farrow
Associate Dean	Karen Paul
Associate Dean	Antonio Pradas
Assistant Dean	Lynda Raheem
Director, School of Accounting	James H. Scheiner

Chairpersons:

Decision Sciences and Information Systems	Enzo Valenzi
Finance	John S. Zdanowicz
Management and International Business	Gary Dessler
Marketing and Business Environment	Barnett A. Greenberg

Faculty

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College of Education

College of Education

College of Education programs are fully accredited by the National Council for the Accreditation of Teacher Education.

The College of Education seeks through its mission to empower professionals by enabling them to acquire the knowledge, skills, and dispositions necessary to exercise control over their lives. This charge further entails the College's assisting professionals to understand that whatever their differences, people have an interconnectedness through common needs and aspirations; they can relate to each other in helpful and supportive ways; and can celebrate their diversity. The critical thrust in the College of Education's mission is thus to facilitate change by provoking in professionals an orientation, awareness, and commitment to improving the human condition.

The theme of the college is The Professional Educator and/or related professional as Facilitator of Learning and Change Within Diverse Populations and Environments. According to the theme, the graduates of any program in the College should be disposed to view teaching as the act of being a facilitator of student growth rather than a source of information to be learned. Teachers, educational leaders, or related professionals who facilitate learning are knowledgeable about the individual backgrounds, preferences, interests, and learning styles of their students and use this knowledge to assist students to reach their full potential.

The educational aim of the College is derived from the theme, the mission statement, and the philosophy of the College. The aim is to facilitate education and growth through individual empowerment, interconnectedness, and change. This aim establishes a basis for subsequent decisions about what to teach (the matter of general education, professional education and content studies) and how to teach (the matter of the knowledge base).

To realize its mission and facilitate learning and change within diverse populations and environments the College offers instructional programs at the undergraduate and graduate levels, engages in research and program

development activities, and provides field services to the educational community.

To support its mission, the College is organized into six separate but related departments:

- Educational Leadership and Policy Studies
- Educational Psychology and Special Education
- Elementary Education
- Educational Foundations and Professional Studies
- Health, Physical Education, and Recreation
- Subject Specializations

Applicants to the College's programs should carefully examine the choices of major concentrations and program objectives. Because there are occasional revisions of College of Education curriculum during the academic year, some curriculum changes may not be reflected in the current catalog. Prospective students are advised to contact appropriate advisors to ask for current information regarding specific programs of interest.

General advisement is available by telephone: (305) 348-2768 for University Park, (305) 919-5820 for North Campus. Broward residents may call (954) 355-5622 for North Campus or for the Broward Program. Dade residents may call (305) 760-5622 for the Broward Program. Specific program advisement is available by prearranged personal appointment with advisors at all locations.

Note: The programs, policies, requirements, and regulations listed in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

All stated admission requirements are to be considered minimums. A student who meets these minimum requirements is not automatically assured admission. Program admission requirements are subject to change. It is the responsibility of the student to assure that the requirements have been met.

It is recommended that students meet with their advisors throughout the program to assure adequate progress.

Master's, Specialist, and Doctoral Degrees

Graduate studies offered by the College provide specialization in degree programs developed to reflect individual student interests. A graduate program may include courses, seminars, field experiences, research courses, theses, and dissertations, depending upon the student's level and area of emphasis.

Master of Science Degree Programs

Master of Science degree programs are offered in the following specialties:

- Adult Education
- Art Education
- Counselor Education
- School Counseling
 - Mental Health Counseling
- Early Childhood Education
- Educational Leadership
- Elementary Education
- English Education
- Health Education:
 - Exercise Physiology
- Health Occupations Education
- Home Economics Education
- Human Resource Development
- International Development Education
- Mathematics Education
- Modern Language Education
 - French
 - Spanish
- Music Education
- Parks and Recreation Management
 - Recreational Therapy
- Physical Education
 - Sports Management
- Reading
- Science Education
- Social Studies Education
- Special Education
 - Varying Exceptionalities
- Teaching English to Speakers of Other Languages (TESOL)
- Technology Education
- Urban Education
 - Instruction in Urban Settings
 - Multicultural: Bilingual Education
 - Multicultural: TESOL
 - Urban Education
 - Vocational Home Economics Education

Vocational Education Administration and Supervision

Vocational Industrial Education

Applicants for admission to most Master's programs in Education must hold or qualify for Florida teacher certification in the appropriate area. All applicants must also satisfy Board of Regents admission requirements: A GPA of 3.0 in the last 60 semester hours of upper division undergraduate study or 1000 (total of verbal and quantitative) on the Graduate Record Examination (GRE). Applicants admitted with a pending GRE score must submit a test score within one semester to be fully admitted. All applicants, regardless of GPA, must submit a GRE score.

Specific programs may have higher standards for admission. Having a minimum GPA and/or GRE score does not assure admission to a program. Admission is subject to the approval of program faculty.

Prior to formal admission to a graduate program, students may be approved to enroll in up to 12 semester hours of 5000 level graduate credit as non-degree seeking students, which, if applicable to the major field of study and approved by an advisor, may be applied to the degree program.

Graduate students will complete at least 30 semester hours of study beyond the bachelor's degree to earn a Master of Science degree in education. However, specific programs may require more than the minimum number of hours. Students may transfer a maximum 6 semester hours taken at another accredited college or university toward a master's degree program having 30-45 semester hours, and a maximum 9 semester hours toward a program having more than 45 semester hours with advisor's approval.

Master's program students must maintain an overall GPA of 3.0 in order to graduate. No more than two grades of 'C' and no grades of 'C-' or less received in courses that are part of a master's degree program of study will be accepted toward graduation.

No more than two workshop courses may be included in a master's degree program.

Alternate Masters Degree Tracks

Applicants who hold a bachelor's degree in a field other than education and wish to teach may want to consider pursuing an Alternate Masters Program, a degree program that

leads to State of Florida teacher certification plus a master's degree.

Art Education
Elementary Education
English Education
Mathematics Education
Modern Language Education
Music Education
Science Education
Social Studies Education
Varying Exceptionalities

Educational Specialist Degree Programs

Education Specialist degree programs are offered in the following specialties:

Curriculum and Instruction:

Instructional Leadership

Educational Leadership

School Psychology

The programs require a minimum of 36 semester hours of work at the University beyond the Master's degree. However, specific programs may require more than the minimum number of hours and may include six semester hours of thesis if that option is chosen.

Admission requirements and transfer of credit are the same as for the master's programs. Other program requirements are contained in the program descriptions which may be obtained from each Department.

Doctor of Education Degree Program Specialties

Doctor of Education degree programs are offered in the following specialties:

Adult Education and Human Resource Development
Vocational and Technical Education Leadership Track
International and Intercultural Development Education Specialty
Curriculum and Instruction
Art Education
Early Childhood Education
Elementary Education
English Education
Instructional Leadership
International and Intercultural Development Education Specialty
Modern Language Education
Mathematics Education
Music Education
Reading
Science Education
Social Studies Education
Teaching English to Speakers of Other Languages (TESOL)

Educational Administration and Supervision

Exceptional Student Education

Higher Education

Higher Education Administration Track

Community College Teaching Track

Educational Psychology-Cognate

International and Intercultural Development Education Specialty

Advisement for these programs may be obtained by calling the appropriate Department office or by contacting the Coordinator of Doctoral Programs at (305) 348-3202. Detailed admission requirements, program descriptions, and graduation requirements may be obtained from doctoral program advisors in specific areas and by examining program descriptions in this catalog.

North Campus and Broward Program

The College of Education has programs of studies at the North Campus and University Tower in Ft. Lauderdale. Students interested in information regarding the North Campus should call the College of Education at (305) 919-5820.

Those interested in information about Broward programs should call (954) 355-5282.

Multidisciplinary Doctoral Program

A multidisciplinary doctoral program is offered in Broward County at the University Tower in downtown Ft. Lauderdale. The program has three programmatic thrusts: Adult Education and Human Resource Development, Curriculum & Instruction and Higher Education. The program is innovative in that it combines rigorous doctoral study with action oriented research. It is designed to facilitate community and organizational change through education change strategies and in a meaningful and creative manner fulfill the mission of the College of Education. The program is offered in a format to make it attractive and available to professionals in southeastern Florida. Students interested in this program should call (954) 355-5282.

Fingerprint Requirement

State of Florida Teacher Certification, in addition to other criteria, requires all applicants to be fingerprinted and checked by the FBI. Some school districts also re-

quire a fingerprint check for student interns and/or student teachers. Students with a history of felony arrests may wish to consider this carefully, and seek advice from an advisor before applying to programs in the College.

Educational Foundations and Professional Studies

Robert V. Farrell, *Associate Professor and Chairperson, Educational Foundations, International Development Education*

Carlos M. Alvarez, *Associate Professor, International Development Education, Educational Psychology*

John A. Carpenter, *Professor, Educational Foundations and International and Intercultural Development Education*

Ersine S. Dottin, *Professor, Educational Foundations, Politics of Education*

Miguel Angel A. Escotet, *Professor, International and Intercultural Development Education and Research*

Rosa Castro Feinberg, *Associate Professor, Educational Foundations, Bilingual Education/TESOL*

Delia Garcia, *Assistant Professor, Educational Foundations and Professional Studies*

I. Ira Goldenberg, *Professor and Dean, Educational Foundations and Urban Education*

Deborah Hasson, *Instructor, Educational Foundations and Professional Studies*

E. Joseph Kaplan, *Associate Professor, Educational Foundations and General Methodology*

Patricia A. Killian, *Assistant Professor, Teaching English as a Second Language*

Jodi Reiss, *Instructor, Teaching English as a Second Language*

Colleen A. Ryan, *Associate Professor, Educational Psychology, Educational Foundations*

S.L. Woods, *Associate Dean and Associate Professor, Educational Foundations, Urban Education*

General Information

The Department is fully committed to two guiding missions of the College of Education: to support the preparation of educators, to pursue research in social, philosophical, multicultural and general methodological needs of schools and post-secondary institutions, and to provide technical assistance in multicultural, social and philosophical development in education. The Department oversees graduate programs and courses for students who

are interested in working in various fields.

Master of Science

The Department of Educational Foundations and Professional Studies offers programs in:

International Development Education

Teaching English to Speakers of Other Languages (TESOL)

Urban Education

Furthermore, it directs doctoral programs specialty tracks in International Development Education, TESOL, Social and Philosophical Foundations of Education and Comparative Education.

The Department also coordinates the Foundations of Education courses and the Professional Education Core. It houses the Dade County Public School/FIU Urban Education Program, which is comprised of the Urban Education Certificate Program and the Master's Degree in Urban Education with specialty track options in Urban Education, Instruction in Urban Settings, Multicultural Education and TESOL and Multicultural/Bilingual Education.

All stated admission requirements are to be considered minimums. A student who meets these minimum requirements is not automatically assured admission. Program admission requirements are subject to change. It is the responsibility of the student to assure that he/she has met the requirements.

Master of Science in International Development Education

The Master of Science degree in International Development Education (IDE) is designed to provide graduate training to students interested in acquiring skills as specialists in educational development within the context of a changing society. The program places special emphasis on planning, management, research, and evaluation skills. Such skills are developed in relation to a specific area of educational specialization and with a special emphasis on understanding the influence of the social context of education on educational development and change.

Admission Requirements

To be admitted into the Master's degree program in International Development Education (IDE), a student must: (a) hold a Bachelor's degree from an accredited institution or its equivalent for international students; (b) have a 3.0 GPA or higher during the last 60 semester hours of undergraduate study (or its equivalent for foreign students); or (c) have a combined score (verbal and quantitative) of 1000 or higher on the GRE (students must submit the GRE scores regardless of their GPA or degree); and/or (d) have a graduate degree from an accredited institution of higher learning; (e) in the case of foreign students whose first language is other than English, a minimum score of 500 on the TOEFL examination is also required; (f) submit two letters of recommendation, preferably from persons in the academic community who are familiar with the applicant's record and who are able to evaluate the applicants background, professional interest, and career goals; (g) submit a short essay of approximately 250 words concerning the applicants background, professional interests and goals in the area of International Development Education.

Degree Requirements

The Master's program requires the completion of a minimum of 36 semester hours of coursework at the graduate level with a 3.0 GPA. A maximum of six semester hours of graduate work may be transferred to the program from other universities. The 36 semester hours are to be completed in accordance with the program curriculum.

Language Requirement

The student must demonstrate competency in the use of a modern language, other than English, prior to graduation. International students may demonstrate competency in their native language. Language courses will not count for credit toward program completion.

Required Program: (36)

The IDE program blends together theoretical foundations and methodological perspectives. Graduate students are exposed to the role of the social, political, economic, scientific and cultural sectors in educational development. Research and analytical skills are provided to insure student's ability to define, gather, analyze and evaluate data for project management and deci-

sion-making. Planning and applied courses are designed to provide the professional competencies for project development and evaluation, training programs and understanding current and future-oriented policy issues and problems in education.

Foundations of Education (6)

- | | | |
|----------|---|--|
| EDF 6608 | Social, Philosophical and Historical Foundations of Education | |
| EDP 6211 | Educational Psychology Applied Foundations | |

Social Context of Education and Development: (6)

- | | | |
|----------|--|---|
| EDF 5812 | National Education Systems: A Comparative Analysis | 3 |
| EDF 5852 | Educational Development Issues in Context: A Multidisciplinary Perspective | 3 |

Educational Research and Evaluation Methods: (3)

- | | | |
|----------|--|---|
| EDF 5481 | Analysis and Application of Educational Research | 3 |
|----------|--|---|

Educational Policy, Planning, Implementation/Management and Evaluation Skills: (9)

- | | | |
|----------|--|---|
| EDF 6654 | Macro- and Micro-Planning in Education | 3 |
| EDF 6658 | Selected Topics: International Development Education, Current Policy Issues and Problems | 3 |
| EDF 6850 | International Development Education: Contemporary Planning Models and Techniques | 3 |

Electives: (6)

The student will select, with advisor's permission, a minimum of six semester hours from the following courses:

- | | | |
|----------|--|---|
| EDF 5287 | Instructional Technology: Systems Approach | 3 |
| EDF 6651 | IDE: Educational Technology, Planning and Assessment | 3 |
| EDG 5707 | Cross-Cultural Studies In Education | 3 |
| EDF 6906 | Directed Study in IDE | 3 |
| EDF 5820 | Latin American Ed.: Historic and | |

- | | | |
|----------|--|-----|
| | Contemporary Overview | 3 |
| EDF 5821 | African Educational Systems: A Comparative Approach | 3 |
| EDF 5850 | Intercultural Ed.: National and International Perspectives | 3 |
| EDF 5851 | Socio/Cultural Conflict in Educational Change | 3 |
| EDF 5955 | Field Study Abroad | 3-6 |
| EDF 7656 | IDE: Innovative Approaches in Educational Planning | 3 |
| EDF 6636 | Intercultural Studies: A Qualitative and Quantitative Analysis | 3 |

Thesis Option (3-9 credit hours)

The final curricular requirement is a thesis which facilitates the integration of theoretical and practical knowledge acquired throughout the program. The thesis topic is selected and developed in consultation with a faculty advisor and an ad-hoc thesis committee. The thesis demonstrates the student's ability to apply analytical, conceptual and technical skills to a specific educational development problem of domestic, regional or international significance.

Non-Thesis Option (by petition only)

A student shall complete 36 credit hours of course-work, approved by her or his supervisory committee. The candidate is required to write a comprehensive/interdisciplinary paper to test the student's general ability in integrating the disciplinary sources of International Development Education. The topic for the paper is given near the end of the candidate's final semester by a committee composed of three faculty members appointed by the IDE Graduate Program/Department. The student has one week to accomplish the task. If the committee considers the paper insufficient, the student may re-write the paper only once until one semester has elapsed or until additional work prescribed by the committee is completed.

Dual Specialties

Students have the opportunity to gain basic expertise in other fields such as: 1) economics, sociology, anthropology, international relations, business administration, etc. 2)

adult education, administration and supervision, community college and higher education, curriculum and instruction; 3) comparative education; 4) intercultural communication and systems consultation; 5) the social context of education and development; or 6) any other field of interest approved by the faculty advisor. The student shall complete 24 hours in IDE and he/she will select, with advisor's permission, a minimum of 12 semester hours from courses available in one of the following areas:

A content area of educational specialization

Comparative/Intercultural Education

System's Consultation and Human Resources

Social, Cultural, Technological, Scientific, Economic and/or Political Context of Development

Courses in any other area of special interest to the student.

Master of Science in Teaching English to Speakers of Other Languages (TESOL)

The Master of Science in TESOL is designed to provide specialized training and content knowledge for teachers of all levels of ESOL, K through 12, adult education and community college education. Students who are state certified teachers may include the five courses required for the Add-on ESOL Endorsement as part of the Master's program.

Admission Requirements

To be admitted into the Master's degree program, a student must: a) hold a bachelor's degree from an accredited university or college; b) have a 'B' (3.0) average or higher in all junior and senior years course work for the bachelor's degree; or have a combined score (verbal and quantitative) of 1000 or higher on the Graduate Record Examination; or hold a master's degree from an accredited university or college; in any case the student must present a GRE score. In the case of foreign students whose first language is other than English, a score of 550 on the TOEFL examination and a score of 5 on the Test of Written English (TWE) are also required. Admission to the program is contingent upon departmental approval.

Degree Requirements

The Master of Science degree consists of 36 semester hours. A maximum of six semester hours may be transferred into the program from outside the University, subject to the approval of the major advisor. A maximum of six semester hours of graduate level courses taken as an undergraduate may be included in the program provided they have not been used to satisfy degree requirements for an undergraduate program.

This program does not meet requirements for initial teacher certification by the Florida Department of Education.

Prerequisite

Introduction to Linguistics is the prerequisite for the Linguistics courses in the program. It may be satisfied with LIN 3010, LIN 3013, or LIN 5018.

Required Program: (36)

Professional Education: (9)

All students will be required to complete 12 semester hours in the College of Education:

EDF 5481	Analysis and Application of Educational Research	3
EDF 6608	Social/Philosophical/Historical Foundations of Education	3
EDP 6211	Educational Psychology: Foundations and Applications	3

Program Courses: (18)

TSL 5142	Curriculum Development in ESOL	3
TSL 5371	Special Methods of TESOL	3
TSL 5938	Principles of ESOL Testing	3
TSL 6908	Field Component (structured field experience)	3
LIN 5501	English Syntax	3
LIN 6937	Applied Linguistics	3

Electives: (9)

Students will choose nine semester hours according to their needs, with the approval of their advisor. To meet state ESOL requirements, certified teachers (K-12) need to include in their electives the following courses:

TSL 5245	Developing ESOL Language and Literacy	3
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EDG 5707 Cross Cultural Studies 3

Graduation Requirements

To receive the Master of Science degree in TESOL, the student must complete the required 36 semester hours of coursework with a minimum 'B' or 3.0 grade point average and no more than two 'C' grades in required courses.

Master of Science in Urban Education

To be eligible to enroll in the Master's in Urban Education program, students must meet all University and College of Education admission requirements.

Program Core (9)

EDP 6211	Psychological Foundations of Education	3
EDF 6608	Social and Philosophical, and Historical Foundations of Education	3
EDF 6636	Intercultural Studies: A Qualitative and Quantitative Studies	3

Specialty Track #1: Urban Education (15)

EDE 5267	Education of the Child in Urban Society	3
EDF 5851	Socio/Cultural Conflict in Education	3
EDF 6689	Urban Education: Defining the Field	3

Guided Electives in Urban Education (6)

Six hours of electives may be taken with approval of academic advisor.

Interdisciplinary Electives (select one) (3)

EDG 5707	Cultural/Crosscultural Studies in Education	3
EDG 6631	Multicultural Education: Defining the Field	3

Elective as approved by the academic advisor

Research or Development Project Core (9)

EDF 5481	Analysis and Application of Educational Research	3
EDF 6925	Special Topics in Urban Education:	

	Qualitative Research in Urban Education	3
EDF 5941	Practicum: Urban Elementary School or	
EDG 5941	Practicum: Urban Secondary School	3

Three hours of electives may be taken in lieu of a course above with approval of academic advisor.

Specialty Track #2: Multicultural Bilingual Education (15)

EDF 5881	Foundations in Bilingual Education	3
EDG 5757	Curriculum in Bilingual Education	3
FLE 4151	Bilingual SL Curriculum and Organization	3
FLE 4871	Teaching Spanish Speakers of Spanish	3
EDG 5942	Multicultural Seminar and Practicum in Urban Education	3

Six hours of electives may be taken in lieu of courses above with approval of academic advisor.

Interdisciplinary Electives: (select one) (3)

EDF 6689	Multicultural Education: Defining the Field	3
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Elective as approved by the academic advisor 3

Specialty Track #3: Instruction in Urban Settings (16)

EDG 5414	Instructional Strategies for Classroom Teacher	3
EDG 5414L	Instructional Strategies Lab	
EDG 5325	Analysis of Teaching	3
EDG 6215	Application of Learning Theory to Instruction	3
EDF 5287	Instructional Technology: Systems Approach	3
Guided electives in Instruction		3

Interdisciplinary Electives: (select one) (3)

EDF 5216	Effective Learning in the Classroom	3
EDF 5707	Cultural/Cross-Cultural Studies in Education	3
EDF 6444	Non-biased Assessment of the Culturally Different	3

Any elective as approved by the academic advisor 3

Specialty Track #4: Multicultural TESOL: (15)

TSL 5371	Special Methods of TESOL	3
TSL 5142	Curriculum Development TESOL	3
TSL 5938	Principles of Esol Testing	3
TSL 5245	Developing ESL Language and Literacy	3
EDF 5942	Multicultural Seminar and Practicum in Urban Education	3

Three hours of electives may be taken in lieu of a course above with approval of academic advisor.

Interdisciplinary Electives: (select one) (3)

EDG 5707	Cultural/Crosscultural Studies in Education	3
EDG 6631	Multicultural Education: Defining the Field	3

Any elective as approved by the academic advisor.

Doctor of Education Degree Programs

The Department of Educational Foundations and Professional Studies in cooperation with the Department of Educational Leadership and Policy Studies offers four doctoral specialty tracks (consult program faculty):

1. Curriculum and Instruction: International and Intercultural Development Education Specialization.

2. Curriculum and Instruction: TESOL Specialization.

3. Adult Education and Human Resource Development: International and Intercultural Development Education Specialization.

4. Higher Education/Community College Teaching: International and Intercultural Development Education Specialization.

Add-on Endorsement in ESOL

Individuals who currently hold or are working toward teacher certificate in Elementary, English, Foreign Language or Special Education, may receive the Add-on Endorsement in ESOL by completing the following set of courses:

Required Program

TSL 5938	Principles of ESOL Testing	3
EDG 5707	Cultural and Cross-Cultural Studies	3
TSL 5371	Special Methods of TESOL	3
TSL 5142	Curriculum Development in ESOL	3
TSL 5245	Developing ESOL Language and Literacy	3

Educational Leadership and Policy Studies

Kingsley Banya, Associate Professor and Chairperson, Curriculum and Instruction: Instructional Leadership

Peter J. Cistone, Professor, Educational Leadership

Joseph Cook, Professor, Higher Education

Charles Divita, Jr., Professor, Adult Education and Human Resource Development

Stephen M. Fain, Professor, Curriculum and Instruction: Instructional Leadership

Allen Fisher, Associate Professor, Educational Leadership

Jo D. Gallagher, Assistant Professor, Adult Education and Human Resource Development

Paul D. Gallagher, Associate Professor, Educational Research, and Vice President, Student Affairs

Lorraine R. Gay, Professor, Educational Research

Barry Greenberg, Professor, Educational Research, Higher Education

Valerie Janesick, Professor, Curriculum and Instruction

Tom Johnson, Professor, Adult Education and Human Resource Development

Robert B. Leiter, Professor, Adult Education and Human Resource Development

Sarah W. J. Pell, Professor, Educational Leadership

Janice R. Sandiford, Associate Professor, Higher Education

Paul A. Rendulic, Assistant Professor, Educational Research

Judith J. Slater, Assistant Professor, Curriculum and Instruction: Instructional Leadership

Douglas H. Smith, Associate Professor, Adult Education and Human Resource Development

The Department of Educational Leadership and Policy Studies offers following degree programs:

Master of Science

Adult Education

Educational Leadership

Human Resource Development

Education Specialist

Curriculum and Instruction

Educational Leadership

Instructional Leadership

Doctor of Education

Educational Administration and Supervision

Adult Education and Human Resource Development

Curriculum and Instruction

Instructional Leadership

Community College Teaching

The department also offers a Certificate Program in Educational Leadership for students who possess a graduate degree from an accredited institution of higher education and who seek State of Florida Certification in Educational Leadership. Specialties in elementary, middle, secondary, and higher education may be included in programs of study.

The department also provides research preparation for College of Education graduate programs. The department graduate programs and support services exist to enhance the College of Education's role of a professional school within the University. The graduate programs and services provide access and offer excellence in professional preparation of educational leaders, researchers, and planners. The programs serve students who focus on South Florida's urban challenges; State of Florida cultural, economic, and social development; national educational policy development; and international cultural, economic, and social development through education.

All stated admission requirements are to be considered minimums. A student who meets these minimum requirements is not automatically assured admission. Program admission requirements are subject to change. It is the responsibility of the student to assure that he/she has met the requirements.

Master of Science Degree Programs in Adult Education and Human Resource Development

The Graduate Programs in Adult Education and Human Resource Development (AE/HRD) are designed for the individual who chooses to serve as AE/HRD director/manager, instructional designer, teacher, instructor, trainer, counselor, and/or researcher. Graduates are working in AE/HRD programs in business and industry, public schools, hospitals, governmental agencies, community colleges, universities, civic associations, military service, and other agencies. Graduate programs of

study are designed in relation to an individual's specific interests, needs, and career goals.

Two master's degree programs are offered: Human Resource Development and Adult Education.

The program in Human Resource Development is designed for persons interested in working in business and industry, government, health and other similar organizations. The program consists of 36 hours, with 30 hours (10 courses) required, and a minimum of six hours (two courses) of elective courses.

Human Resource Development (HRD)

Degree Hours: (36)

Required Core: (24) (Courses are listed in required sequence)

ADE 5081	Introduction to Adult Education and Human Resource Development	3
ADE 5385	Adult Teaching and Learning	3
ADE 5383	Instructional Analysis and Design	3
ADE 6286	Instructional Development and Implementation	3
ADE 6180	Organizational and Community Processes in AE/HRD	3
ADE 6260	Management of AE/HRD Programs	3
ADE 6945	Internship in AE or HRD	3
EDF 5481	Analysis and Application of Education Research	3
EDF 6211	Educational Psychology: Foundation and Application	3
EDF 6606	Social, Philosophical and Historical Foundations of Education	3

Advised Electives 6

Adult Education

The program in Adult Education is designed for persons interested in working in public school or higher education adult and continuing education. This program meets the requirements for state certification in public school adult education administration. It consists of 30 hours, with 21 hours (seven courses) required, and a minimum of 9 hours (three courses) of elective courses.

Required Program: (30)**Required Core: (21):**

ADE 5081	Introduction to Adult Education and Human Resource Development	3
ADE 5385	Adult Teaching and Learning	3
ADE 6180	Organizational/Community Processes in AE/HRD	3
ADE 6260	Management of AE/HRD Programs	3
EDF 5481	Analysis and Application of Education Research	3
EDF 6606	Social, Philosophical and Historical Foundations of Education	3
EDP 6211	Psychological Foundations of Education	3
Advisor approved electives		9

Master of Science in Educational Leadership

The Master of Science degree program in Educational Leadership consists of courses and experiences designed to develop entry level competencies for persons seeking State of Florida certification in Educational Leadership. The program comprises the Florida Educational Leadership core curriculum and the competencies for high-performing principals identified by the Florida Council on Educational Management.

Admission to the program requires that the candidate meet criteria established by the Board of Regents for graduate study and other additional criteria established by the program faculty.

To become certified in Educational Leadership all candidates must successfully complete the Florida Educational Leadership core curriculum and pass the Florida Educational Leadership Examination.

Degree Hours: (39)

EDA 6061	Introduction to Educational Leadership	3
EDA 6192	Leadership in Education	3
EDA 6195	Communication in Educational Leadership	3
EDA 6232	School Law	3
EDA 6242	School Finance	3

EDA 6271	Microcomputer Application for Administrators	3
EDA 6930	Seminar in Educational Leadership	3
EDF 5481	Analysis and Application of Educational Research	3
EDS 6115	School Personnel Management	3
EDF 6606	Social, Philosophical and Historical Foundations of Education	3
EDP 6211	Psychological Foundations of Education	3
Advisor approved electives		6

Six semester hours of approved electives must be earned in one of the following areas: Early Childhood, Middle School, or Secondary School curriculum and/or instruction for state certification. The selection of courses to meet this requirement requires the approval of a faculty advisor.

Educational Specialist in Curriculum and Instruction**Educational Specialist Degree**

The Educational Specialist program in Curriculum and Instruction is designed to build upon the educator's master's degree preparation and professional experience. The program introduces professional educators to the theoretical basis of curriculum and instruction and provides individually tailored opportunities for students to connect theory with practice. The program requires a minimum of 36 semester hours beyond the masters.

Admission Requirements

Applicants must hold a masters degree in some area of education. A 3.0 GPA in the last 60 semester hours of undergraduate study or a 3.5 GPA in the master's program from an accredited university and a combined verbal and quantitative score of 1000 on the Graduate Record Examination (GRE) are required. Two letters of recommendation and an interview with program faculty are also required. A candidate for admission to the program will be judged not only on the basis of quantitative criteria (listed elsewhere in this catalog) but also in relation to prior experience, especially as it relates to future career goals.

Core Courses:

EDG 6250	General Curriculum Development	3
EDG 6285	Curriculum Evaluation	3
EDG 7222	Curriculum: Theory and Research	3
EDG 7362	Instruction: Theory and Research	3
EDG 7665	Seminar in Curriculum	3
EDG 7934	Seminar in the Social Foundations	3
EDP 7008	Educational Psychology: Advanced Applications	3
EDF 7937	Advanced Topics in the Social Foundations of Education	3

Research and Statistics: (9)**Required Courses:**

STA 6166	Statistical Methods in Research	3
EDF 6486	Research Methods in Education: Experimental Design and Analysis ¹	3

¹Prerequisite: EDF 5481 and STA 6166.

One of the following:

EDF 6403	Quantitative Foundations of Education	3
or		
EDF 6475	Qualitative Foundations of Educational Research	3

Nine semester hours plus M.A./M.S. major area work for a total of at least 18 semester hours in the specialized area). These courses are selected with faculty advisor in the area of specialization.

Residency

Students must complete a residency requirement by taking at least 18 semester hours in one calendar year.

Transfer of Credit

Students may transfer in up to 30 hours from their Master's Degree program. Transfer credit usually applies to the selected area of specialization. All transfer credit must be approved by the student's Program of Studies Committee.

Educational Specialist in Educational Leadership

The Educational Specialist program in Educational Leadership is designed to build upon the educator's master's degree preparation and professional experience. The program may include coursework for state certification in Educational Leadership. The program requires the completion of a minimum of 36 semester hours beyond the master's degree.

Admission Requirements

Applicants must hold a current regular Florida teaching certificate or possess such prior to award of the degree. A 3.0 GPA in the last 60 semester hours of undergraduate study or a 3.5 GPA in the master's program from an accredited university and a combined verbal and quantitative score of 1000 on the Graduate Record Examination (GRE) are required. Two letters of recommendation and an interview with program faculty are also required.

Doctor of Education Degree Programs

Admission Requirements

The College of Education has common admission requirements for its doctoral programs regardless of the specialty sought. Applicants to the program must submit the following records and documents to the Office of Admissions:

1. A completed Application for Graduate Admission with appropriate fees.
2. An official copy of the Graduate Record Exam (GRE) scores.
3. Official transcripts of all higher education institutions attended.

Additionally, applicants must submit the following to the Coordinator of Doctoral Programs in the College of Education.

1. Three letters of reference attesting to the applicant's ability to succeed in doctoral study;
2. A current resume/vita;
3. A statement that sets forth the applicant's career goals and relates these goals to the completion of the doctoral program.

No action will be taken on incomplete files. A file is considered incomplete if any of the above is missing.

The application and all supporting documentation is reviewed by program faculty. The criteria applied in reviewing the applicant's file are noted below. Exceptions to one or more of the stated criteria may be granted provided the applicant can provide compelling reasons and evidence.

1. A grade point average (GPA) of at least 3.0 (on a 4.0 scale) in upper level undergraduate work;
2. A 3.25 GPA in all graduate work attempted;
3. A master's degree from an accredited institution;
4. A minimum combined verbal and quantitative score of 1000 on the GRE;
5. Foreign students must demonstrate a TOEFL score of at least 500.

Upon completion of the review of the file the applicant will be interviewed by program and departmental faculty which comprise a Faculty Admissions Committee. Final decisions are made by the Faculty Admissions Committee and the Dean of the College. As admission to programs is competitive, meeting minimum admission requirements does not assure admission into the program. A candidate for admission to the program will be judged not only on the basis of quantitative criteria (listed elsewhere in this catalog) but also in relation to prior experience, especially as it relates to future career goals. Additional information is available from the Coordinator of Doctoral Programs or Program Faculty.

Professional Education Core

EDF 7937	Advanced Topics in the Social Foundations of Education	3
EDP 7008	Educational Psychology: Advanced Applications	3

All doctoral students must enroll in EDF 7937 within their first year of admission.

Research and Statistics Component of Doctoral Programs

A research requirement of nine semester hours, taken in the order listed, is common to all College of Education doctoral programs.

Research and Statistics (9)

Required Courses:

STA 6166	Statistical Methods in Research	3
EDF 6486	Research Methods in Education: Experimental Design and Analysis ¹	3

¹Prerequisite: EDF 5481 and STA 6166.

One of the following:

EDF 6403	Quantitative Foundations of Education	3
	or	
EDF 6475	Qualitative Foundations of Educational Research	3

Candidacy Examinations and Advancement to Candidacy

The student must successfully pass candidacy examinations covering coursework and also submit copies of a dissertation proposal, which has been approved by the supervisory committee, to the Dean of the College and to the Dean of Graduate Studies.

Program Core (24-36)

Dissertation (24)

The student is responsible for a minimum of 24 semester hours of dissertation credits. The dissertation must be an original contribution to knowledge. The doctoral dissertation is the final component of the series of academic experiences that culminate in the awarding of the Ed.D. degree. A successful dissertation is a demonstration of the candidate's ability to use the tools and methods of basic and/or applied research in the field, to organize the findings, and to report them in a literate, logical, and compelling fashion.

The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum

of six credit hours of dissertation are to be undertaken each semester the dissertation is being prepared. Continuous enrollment in dissertation study is required (including summer semester).

Adult Education and Human Resource Development (AE/HRD)

The doctoral program in Adult Education and Human Resource Development (AE/HRD) is designed to serve the advanced graduate study needs of a wide range of professionals in leadership positions who are concerned with the design, implementation, and evaluation of educational and training programs for adults. These professionals may be engaged in program development and evaluation, instruction and training, counseling and advisement, consultation, and marketing and recruitment activities designed to further the growth and development of adult learners, or to improve organizational functioning through educationally-related intervention strategies, or both. Accordingly, participants in the program come from such diverse backgrounds as business and industry, higher education, public and proprietary schools, health and social service agencies, law enforcement and corrections, the military, governmental agencies, religious organizations, libraries and museums, and civic and professional associations.

Additional Admission Requirements

In addition to the admission requirements stated, the applicant must possess:

1. Evidence of commitment to a career in the broad field of Adult Education and HRD;
2. Successful professional experience in the field of Adult Education and HRD;
3. Potential for leadership or research in the field, or both.

A candidate for admission to the program will be judged not only on the basis of quantitative criteria (listed elsewhere in this catalog) but also in relation to prior experience, especially as it relates to future career goals.

Program of Study

Doctorate programs of study vary according to the individual needs of the participants and their current or anticipated professional goals. A typical program will require a minimum of 101 semester hours beyond

the baccalaureate degree and will involve the categories of courses noted below. The list should be considered as a sample program rather than an absolute delineation of exact requirements. Actual programs are planned by the participants, their major professor, and doctoral committee.

Adult Education Core (18-24)

Adult Education and HRD includes such courses as comprehensive Adult Education and HRD planning, program development, instructional design, adult teaching and learning, Adult Education and HRD trends and issues, strategies, and research.

Professional Education Core

Electives (9-15)

Elective Core varies according to the participants' background and professional goals.

Research and Statistics (9)

Prospectus and Dissertation (24)

The student is responsible for a minimum of 24 semester hours of dissertation credits. The dissertation must be an original contribution to knowledge in an area of Adult Education/Human Resource Development.

The student is expected to complete the dissertation within nine years from the date of admission to the AE/HRD doctoral program. A minimum of six credit hours of dissertation are to be undertaken each semester the dissertation is being prepared. Continuous enrollment in dissertation study is required (including Summer semester).

Curriculum and Instruction

The doctoral program in Curriculum and Instruction offers specialties in the following areas: Art Education, Early Childhood Education, Elementary Education, English Education, Instructional Leadership, Mathematics Education, Modern Language Education, Music Education, Reading, Science Education, and Social Studies Education.

Additional Admission Requirements

In addition to the admission requirements stated, the applicant must possess:

1. Career goals in professional education consistent with the objectives of a doctoral program.
2. Appropriate prior work experience.

A candidate for admission to the program will be judged not only on

the basis of quantitative criteria (listed elsewhere in this catalog) but also in relation to prior experience, especially as it relates to future career goals.

Core Courses: (15)

EDG 7222	Curriculum: Theory and Research	3
EDG 7362	Instruction: Theory and Research	3
EDG 7665	Seminar in Curriculum	3
EDF 7937	Advanced Topics in the Social Foundations of Education	3
EDP 7008	Educational Psychology: Advanced Applications	3

Specialty Area: (36)

The specialty areas include art education, early childhood education, elementary education, English education, instructional leadership, mathematics education, modern language education, music education, reading education, science education, and social studies education.

Cognate Area: (18)

The cognate area requires a minimum of 18 semester hours of coursework in a single area of study related to the specialty. The courses should be chosen with regard to coherence and relevance to the anticipated substantive aspect of the dissertation and in consultation with the advisor. The cognate area may be taken in the College of Education, in the College of Arts and Sciences, or any other area offering courses relevant to the student's program.

Research and Statistics (9)

Candidacy Examinations and Advancement to Candidacy

The student must successfully pass candidacy examinations covering coursework and also submit copies of a dissertation proposal, which has been approved by the supervisory committee, to the Dean of the School and to the Dean of Graduate Studies.

Dissertation (24)

The student is responsible for 24 semester hours of dissertation credits. The dissertation must be an original contribution to knowledge in an area of early childhood education, elementary education, secondary

education, one of the K-12 areas, or in instructional leadership.

The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum of six credit hours of dissertation are taken each semester the dissertation is being prepared. Continuous enrollment in dissertation study (including Summer semester) is required.

EDG 7980 Doctoral Dissertation 24

Educational Administration and Supervision

The doctoral program in Educational Administration and Supervision is designed for students who wish to pursue leadership roles in educational institutions. Among those roles are principals, supervisors, directors, and superintendents of public and independent schools; state, federal, and international agency administrators and staff; college and university administrators; and professors of Educational Administration and Supervision. The curriculum is designed to enable students to become familiar with and utilize effectively both theoretical and technical knowledge. The program of study is multidisciplinary and integrates broad intellectual perspectives into the study and practice of Educational Administration.

Additional Admission Requirements

In addition to the admission requirements stated, the applicant must:

1. Provide evidence of three years or more of successful and appropriate professional experience.
2. Engage in an interview with program faculty.
3. Receive a positive recommendation by the program faculty.

A candidate for admission to the program will be judged not only on the basis of quantitative criteria (listed elsewhere in this catalog) but also in relation to prior experience, especially as it relates to future career goals.

Program of Study

The program requires the completion of a minimum of 99 semester hours of academic work beyond the baccalaureate degree. Program requirements include the following:

Required Core Courses (24)

Professional Education Core (6)
Advisor Approved Electives in Educational Administration and Supervision (12)
Minor/Cognate Area (15)
Research and Statistics (9)

Upon completion of the coursework, each student must pass a candidacy examination and be advanced to candidacy.

Dissertation (24)

The doctoral dissertation is the final component of the series of academic experiences that culminate in the awarding of the Ed.D. degree. A successful dissertation is a demonstration of the candidate's ability to use the tools and methods of basic and/or applied research in the field, to organize the findings, and to report them in a literate, logical, and compelling fashion. A minimum of six credit hours of dissertation are to be undertaken each semester during the time that the dissertation is being prepared. Continuous enrollment in dissertation work is required (including Summer semester).

Additional information concerning the doctoral program is available from program faculty.

Higher Education

The doctoral program in Higher Education is designed to provide the opportunity for specially selected students to enhance instructional and research skills related to the continuing development and operation of the community college or other higher education institution. The program is offered in a format to make it attractive and available to place bound professionals in Southeast Florida. The program is designed to stimulate research related to the community college, particularly in the development of innovative instructional approaches. A candidate for admission to the program will be judged not only on the basis of quantitative criteria (listed elsewhere in this catalog) but also in relation to prior experience, especially as it relates to future career goals.

Post-baccalaureate coursework minimum requirements for the degree, while subject to individual variations, consist of the following:

Higher Education/Community College Teaching Core: (21)

EDH 7065	Higher Education: Philosophical and Historical Perspectives	3
EDH 7204	Higher Education: Community College	3
EDH 7307	Higher Education: Instructional Methods	3
EDH 7225	Higher Education: Developmental Programs	3
EDG 7222	Curriculum Theory and Research	3
EDH 7308	Occupational Programs	3

Additional courses in Education that will enhance the student's instructional abilities and skills. 3

Professional Education Core (6)

Higher Education/Administration Core: (21)

EDH 7065	Higher Education: Philosophical and Historical Perspectives	3
EDH 7204	Higher Education: Community College	3
EDA 7236	Law	3
EDA 7550	Administration in Higher Education	3
EDG 7222	Curriculum Theory and Research	3
EDH 7052	Student and Support Services	3
EDH 7308	Higher Education: Occupational Programs	3

Additional courses in Education that will enhance the student's instructional abilities and skills. 3

Professional Education Core (6)

Instructional Field Specialty Area: (30)

The instructional field consists of 30 graduate hours related to the subject which is or will be taught in the community/junior college.

Previous graduate course work, including work completed as part of a master's degree program may be applied toward the doctoral program requirements.

Cognate Area: (18)

The cognate area may be taken in one or more subject areas and may include graduate or undergraduate (post-baccalaureate) courses. The

design of the cognate should assist the student in developing into a well-rounded community college teacher, one who is able to adapt to changing conditions of instruction.

Research and Statistics: (9)

The research and statistics requirement is designed to assist the student in expanding the capacity to use research related to instruction.

Dissertation: (24)

The dissertation should be on a topic of importance to higher education and should reflect the student's professional interests and goals.

The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum of six credit hours of dissertation are to be undertaken each semester the dissertation is being prepared. Continuous enrollment in dissertation is required (including summer semester).

Professional Certificate Programs

Adult Learning Systems

The professional certificate in adult learning systems is a comprehensive and integrated university-based option to provide professionals with skills and training for adult education programmers. The non-degree certificate program may be pursued in conjunction with a bachelor's or master's degree; or beyond the bachelor's or master's degree; or independent of the pursuit of a degree. The latter option is for persons having special responsibilities and experiences in the field of Adult Education and Human Resource Development.

Required Program: (20)

ADE 5383	Instructional Analysis and Design	3
ADE 5385	Adult Teaching and Learning	3
ADE 6180	Organizational and Community Processes in AE/HRD	3
ADE 6925	Workshop in Adult Education and Human Resource Development	1-6

ADE 6930	Seminar in Adult Education and Human Resource Development	1-3
ADE 6935	Special Topics in Adult Education and Human Resource Development	1

To be admitted to the program the student must:

1. Hold or be seeking a bachelor's or master's degree from an accredited institution;
2. Have submitted three letters of recommendation describing ability to engage in and profit from such a program of studies;
3. Submit a personal statement of interests and goals which relate to Adult Education and Human Resource Development.

Applicants will develop a project or problem-oriented learning contract during the initial workshop to be pursued throughout the program. Contracts will be refined as the student progresses through the first part of the program of studies. The culminating activity, the Seminar, ADE 6930, will require the student to complete, share, and evaluate the tasks and activities within the individual learning contract.

Educational Leadership

The Certificate Program in Educational Leadership is designed for students who have a master's degree in a field of education other than Educational Leadership. The coursework leading to the certificate specifically addresses the competencies assessed in the Florida Educational Leadership Examination and constitutes the "modified Florida program in educational leadership" (SBER 6A-4.0082) at the University. The program may be used to satisfy part of the requirements of the Florida Department of Education for certification in Educational Leadership.

Required Program: (24)

EDA 6192	Leadership in Education	3
EDA 6195	Communication in Educational Leadership	3
EDA 6232	School Law	3
EDA 6242	School Finance	3
EDA 6271C	Microcomputer Applications for Administrators	3
EDA 6503	The Principalsip	3

EDS 6115	School Personnel Management	3
Advisor approved electives in Curriculum and Instruction		3

Educational Psychology and Special Education

Wendy Cheyney, Associate Professor and Chairperson, Learning Disabilities

Tsai Bailey, Assistant Professor, Counselor Education, Educational Psychology

Patricia Barbella, Assistant Professor, Emotionally Handicapped

Michael P. Brady, Professor, Special Education

Marisal Gavilan, Associate Professor, Educational Psychology/Bilingual Education

Philip J. Lazarus, Associate Professor, School Psychology, Educational Psychology

Luretha F. Lucky, Associate Professor, Mental Retardation

Adriana McEachern, Assistant Professor, Counselor Education, Educational Psychology

Mariha Pelaez, Assistant Professor, Educational Psychology, Behavior Analysis

Howard Rosenberg, Associate Professor, Mental Retardation

Smita Shulka, Assistant Professor, Emotionally Handicapped

Stephen S. Strichart, Professor, Learning Disabilities

Jethro W. Toomer, Professor, Community Mental Health Counseling

The Department of Educational Psychology and Special Education offers a variety of programs to prepare counselors to work in school and community mental health settings, psychologists to work in the schools, and teachers of emotionally disturbed, gifted, learning disabled, and mentally retarded students. All programs require substantial supervised fieldwork. State of Florida certification requirements are met or are prerequisites for all programs preparing school personnel.

It is recommended that students meet with an advisor throughout the program to assure adequate progress.

Master of Science

Community Mental Health Counseling

School Counseling

Special Education

Varying Exceptionalities

(Alternate Track Masters Degree)

Educational Specialist

School Psychology

Doctor of Education

Exceptional Student Education

Master of Science Degree Programs

Educational Psychology

Programs within the field of Educational Psychology are designed to train professionals to meet the unique needs of individuals who experience cognitive, academic, and/or social-emotional difficulties that interfere with the individual's progress in school and in the community. Specific competencies are delineated for professionals in the field of school counseling, community mental health counseling, and school psychology.

These programs emphasize the blending of research and theory with practical applied experience. They consider the urban, multi-cultural nature of the community, as well as more general trends within specific fields. All programs involve extensive field work with accompanying seminars. Independent study courses are available to allow students to pursue specialized interests and needs.

Applicants are required to submit an application to the Office of Admissions. All applicants must present GRE scores for the Verbal and Quantitative sections, as well as all official transcripts to the Office of Admissions at the University. Three letters of recommendation (at least one from academic sources and one from work or volunteer experience), an autobiographical statement and a curriculum vitae (resume) need to be submitted to the Department's Graduate Admissions Committee. Candidates are admitted by action of the Department's Graduate Admissions Committee. Criteria for program acceptance include appropriate GRE scores, undergraduate grade point average during junior and senior years, work and volunteer experience, quality and source of letters of recommendation, and the candidate's career aspirations and goals. A combined Verbal-Quantitative GRE score of 1000 or GPA of 'B' or higher during the undergraduate junior and senior years (i.e. last 60 semester hours), or both, are required for a candidate to be admitted via regular procedures. An interview is required for admissions into the School Psychology program, and may be required for admission into

the Mental Health Counseling and School Counseling programs.

Regardless of the GPA, GRE scores must be submitted and have been attained within a three year period prior to the time of admission. Students may transfer a maximum of nine semester hours earned at another institution into the program provided the course work taken does not exceed a three year time period. Students are allowed a maximum of six years from the date of initial enrollment to complete program requirements. Periods of noncontinuous enrollment do not count against the six year period provided a "Request for program interruption" is approved by the Graduate Admissions Committee.

Given the unique nature of the fields of counseling and school psychology requiring mastery of cognitive skills and demonstration of relevant and appropriate interpersonal skills, the faculty retains the right to "counsel out" of the program and/or not recommend for internship placement any student whose level of interpersonal competence is considered incompatible with that required for effective functioning as a counseling or school psychology practitioner.

All stated admission requirements are to be considered minimums. A student who meets these minimum requirements is not automatically assured admission. Program admission requirements are subject to change. It is the responsibility of the student to assure that he/she has met the requirements. The deadline for receipt of completed applications for Fall semester admissions is March 1 for the Community Mental Health Counseling, School Psychology and School Counseling programs. Allow 6-8 weeks for application to be processed by the Admissions Office and forwarded to the Department prior to the March 1 deadline.

All programs preparing school personnel are approved by the State of Florida, and allow students completing the program to be eligible for certification by the State.

Once admitted, each student is responsible for tracking academic progress throughout the program, and a degree can be revoked if academic dishonesty or fraudulence is discovered.

Counselor Education Tracks

The counselor education tracks require 60 semester hours, for the Mental Health track and 51 semester hours for the School Counseling track and leads to the Master of Science degree. The tracks follow a competency based model, the early part of which is largely generic in nature and is concerned with the development of knowledge and skills in the areas of individual and group counseling, consultation, preventive mental health, educational-vocational development, client appraisal, systems intervention, and model program organization and evaluation. The latter part of the program is more differentiated, and enables a specialization in either community mental health or school counseling. Both areas of specialization meet the standards recommended by the American Counseling Association and specialization in school counseling qualifies the graduate for the Florida School Guidance Certificate. The Community Mental Health Counseling curriculum meets the master's degree requirement for eligibility towards licensure as a mental health counselor by the State of Florida, Department of Professional Regulation.

The prospective student should be advised that a substantial amount of time is spent in field work to meet practicum and internship requirements. The practicum requirement is the equivalent of one work day per week spent in a field placement during one academic semester followed by an internship consisting of a 40 hour work week in a field placement for the duration of one academic semester. The student should plan for this field work to be during the day, rather than during evening hours. Program completion is not compatible with full time employment.

All students entering the School Counseling track with an undergraduate degree in an area other than education must enroll for courses in general professional education as required by the Florida State Department of Education in order to meet state certification requirements in Florida.

Students applying to the Community Mental Health Counseling program with an out-of-field undergraduate major must complete 18 hours of prerequisite coursework.

Students enrolling in courses under Special Student status, must meet all existing prerequisites prior to course enrollment and obtain permission of the instructor. Due to the importance of continuity in skill development for counselor training, required prerequisites must be met within a two year period prior to enrollment. Additionally, instructor permission may be required.

Community Mental Health Counseling

Degree Hours: (60)

MHS 6700	Professional Problems in Counseling	3
MHS 5400	Counseling Theories and Skills	3
MHS 6513	Human Interaction I: Group Process and Social Behavior	3
MHS 6410	Behavioral and Cognitive Modification Techniques in Counseling and Education	3
MHS 6514	Human Interaction II	3
EDF 5481	Analysis and Application of Educational Research I	3
MHS 6411	Advanced Counseling and Consultation: Theory and Practice	3
MHS 6200	Appraisal and Measurement in Counseling	3
MHS 5350	Educational-Vocational Counseling	3
MHS 6630	Program Evaluation in Counseling & School Psychology	3
MHS 6800	Advanced Practicum in Counseling and Consultation	3
MHS 6820	Supervised Field Experience Counseling	10
MHS 6930	Special Topics in Counseling and School Psychology (1, repeatable to 9)	3
MHS 6428	Cross Cultural Counseling	3
Advisor approved electives ¹		12

¹Students should consult with program advisor regarding courses required by the Department of Business and Professional Regulation for certification eligibility as a Mental Health Counselor.

School Counseling

Degree Hours: (51)

Professional Studies: (9)

EDP 6211	Educational Psychology	3
EDF 6608	Social, Philosophical, Historical Foundations of Education	3
EDF 5481	Analysis and Application of Educational Research	3

Counseling Core: (18)

MHS 5400	Counseling Theories and Skills	3
MHS 6411	Advanced Counseling and Consultation	3
MHS 6200	Measurement and Appraisal in Counseling	3
MHS 6428	Cross Cultural Counseling	3
MHS 5350	Educational-Vocational Counseling	3
MHS 6511	Group Counseling	3

Counseling Specialization: (15)

SDS 6700	Organization and Administration of School Counseling	3
SDS 6411	Counseling Children and Adolescents	3
SDS 5460	Crisis Counseling and Interventions	3
SDS 6784	School Law for Student Services Workers	3
SDS 6199	Family, School Consultation and Collaboration	3

Professional Clinical Experiences: (9)

SDS 6800	Advanced Practicum in Counseling and Consultation	3
SDS 6820	Supervised Field Experience in Counselor Education	6

Corequisites: Students who do not hold a Florida Teacher's Certificate must complete 6 credits of courses covering general methods of teaching requirements prior to graduation. Students must also show proof of passing the Teacher Competency Examination. Application for professional experiences must have faculty advisor approval and must be submitted to the office of the director of student teaching by March 1 for fall semester placements and July 1 for spring placements.

Special Education

The Department offers two master's degrees and a doctoral program in Special Education.

The Master's Program in Special Education is for students already certified in an area of Exceptional Student Education. It consists of a common core of 27 credits in advanced areas of special education, plus a choice of 9 credits in an area of concentration. Some areas of concentration may lead to additional endorsement or certification. Special areas of concentration may be planned by the advisor. This program has a total of 36 credits.

The Alternate Track Master's Program in Varying Exceptionalities is for students holding a baccalaureate degree in an area other than education. It provides the student with entry level skills for teaching students with mild disabilities and the appropriate course work to be certifiable in varying exceptionalities. In addition, several advanced theory and research courses are required.

The Doctoral Program in Exceptional Student Education prepares students for administrative, supervisory, research, and or university faculty positions in Special Education.

Master of Science Degree in Special Education

The major competencies in the Master's Degree program in Special Education are an extension and refinement of those developed by the student in the undergraduate special education curriculum, and include: a) assessment of learning styles through observation and ongoing monitoring techniques; b) application of behavioral approaches to the building, monitoring and modification of classroom behavior; c) communication of information concerning children to others within the school and to parents, d) curriculum planning and innovation including staffings and IEP development; e) supervision and leadership of special education units; and f) consultation skills.

Program applicants are required to submit an application to the Office of Admissions. All applicants must present GRE scores for the Verbal and Quantitative sections, three letters of recommendation (at least one from academic sources and one from work or volunteer experience), and an autobiographical statement. Candidates are admit-

ted by action of the Department's Graduate Admissions Committee. Criteria for program acceptance include GRE scores, undergraduate grade point average during the junior and senior years, work and volunteer experience, quality and source of letters of recommendation, and the candidate's career aspirations and goals. A combined Verbal-Quantitative GRE score of 1000 or GPA of 3.0 or higher, during the undergraduate junior and senior years is required for a candidate to be admitted via regular procedures. Regardless of the GPA, the applicant must submit a GRE score. Applicants who do not hold a valid Florida Teaching Certificate must complete all requirements for certification in addition to degree requirements.

Professional Certificate programs are available in a number of specialized areas. Consult the program faculty for further information.

In-Field Majors

The following Master's program of study is for the student who holds an undergraduate degree in Special Education from Florida International University. A student with an undergraduate major in Special Education from another institution must plan a program with an academic advisor to ensure having the entry skills for this program.

Degree Program Hours: (36)

Required Core For All Students: (18)

EDF 6608	Social, Philosophical, and Historical Foundations of Education	3
EDP 6211	Educational Psychology: Foundations and Applications	3
EDF 5481	Analysis and Application of Educational Research	3
EEX 6846	Seminar in Special Education: Issues and Trends	3
EEX 6535	Seminar in Special Education: Supervision and Leadership	3
EEX 6912	Advanced Theory and Research in Special Education	3

SPS 6199	Family/School Consultation and Collaboration	3
EEX 6765	Instructional Technology	3
EEX 6228	Integration of Assessment, Curriculum and Instruction	3
Area of concentration		9

Area of concentration may be selected from an endorsement such as Gifted, ESOL, or as planned and approved by student and advisor.

Gifted Education (Endorsement)

EEX 6417	Guidance and Counseling of Gifted	3
EGI 5051	Nature and Needs of Gifted	3
EGI 5232	Educational Procedures and Curriculum for the Gifted	3
EGI 6306	Creativity and the Gifted	3
EGI 6405	Gifted Minority Students	3

Out-of-Field Majors

Students with certification in Elementary Education may enter the Master's degree program in Special Education by meeting the standard entrance requirements and completing the coursework which enables them to be certified in an area of exceptional student education. The required Special Education Core courses and the specialization course requirements are listed below.

Students certified in an area other than Elementary Education should see an advisor for an individual program of study analysis.

A student eligible for or holding a Florida Teaching Certificate in other areas of education should consult with an academic advisor for evaluation of entry competencies to the program.

Required Special Education Core ¹

EEX 6051	Education of Students with Exceptionalities	3
EEX 6106	Acquisition of Speech and Language Skills	3
EEX 6227	Educational Assessment of Students with Exceptionalities	3
EEX 6608	Applied Behavior Analysis in Education	3
EEX 6771	Independent Living for People with Disabilities	3

Specialization Requirements**Varying Exceptionalities**

EEX 4240	Nature and Needs of Students with Mild Disabilities ¹	3
EEX 6060	or Curriculum Planning and Development in Special Education	
EMR 5215	Strategies for Teaching Students with Mental Retardation ¹	3
EED 5225	Strategies for Teaching Students with Emotional Handicaps ¹	3
ELD 5235	Strategies for Teaching Students with Learning Disabilities ¹	3

Mental Retardation

EMR 6852	Advanced Theory and Practice: Mental Retardation	3
EMR 4221	Curriculum for Teaching Students with Mental Retardation	3
EMR 5215	Strategies for Teaching Students with Mental Retardation ¹	3

Learning Disabilities

ELD 4230	Curriculum for Teaching Students with Learning Disabilities	3
ELD 5235	Strategies for Teaching Students with Learning Disabilities ¹	3
ELD 6323	Advanced Theory and Practice: Learning Disability	3

Emotionally Handicapped

EED 6226	Advanced Theory and Practice: Emotionally Handicapped	3
EED 4212	Behavioral Approaches to Classroom Learning	3
EED 4244	Curriculum for Teaching Students with Emotional Handicaps	3
EED 5225	Strategies for Teaching Students with Emotional Handicaps ¹	3

Students may enroll for undergraduate or graduate courses. Students must ensure that at the time

of graduation they have 30 credit hours of Master level course work.

¹Extensive field work required.

**Alternate Master's Track:
Varying Exceptionalities**

Admission requirements to the Alternate Master's Track in Varying Exceptionalities are the same as those of the Special Education Master's Program.

Students holding a baccalaureate degree outside of education may prepare for entry level into the field of special education by completing the Alternate Master's Track program, which includes the following course work.

Professional Studies

EDG 5414	Instructional Strategies for the Classroom Teacher	4
EDG 5414L	Instructional Strategies for the Classroom Lab	1
EDF 5517	History of American Education	3
EDP 5005	Educational Psychology: Applications to the Classroom	3
EDF 5481	Analysis and Application of Educational Research	3
EEX 6051	Education of Students with Exceptionalities	3
EEX 6106	Acquisition of Speech and Language Skills	3
EEX 6227	Educational Assessment of Students with Exceptionalities	3
EEX 6608	Applied Behavior Analysis in Education	3
EEX 6771	Independent Living for Individuals with Disabilities	3
LAE 5352	Literacy Instruction in the Primary Grades	3
RED 5153	Literacy Instruction in the Intermediate Grades	3
MAE 4310	Teaching Elementary Math	3
EEX 6060	Curriculum Development for Students with Mild Disabilities	3
EMR 5215	Strategies for Teaching Students with Mental Retardation ¹	3
EED 5225	Strategies for Teaching Students with	

ELD 5235	Emotional Handicaps ¹	3
EDF 5481	Strategies for Teaching Students with Learning Disabilities ¹	3
EEX 6912	Analysis and Application of Educational Research	3
EEX 6862	Advanced Theories and Research: Special Education	3
EEX 6862	Student Teaching	6
EEX 6863	or Supervised Field Experience	6

To Add: Specific Learning Disabilities:

ELD 4230	Curriculum for Teaching Students with Learning Disabilities ¹	3
ELD 6323	Advanced Theory and Practice: Learning Disability	3

To Add: Mental Retardation:

EMR 4221	Curriculum for Teaching Students with Mental Retardation ¹	3
EMR 6852	Advanced Theory and Practice: Mental Retardation	3

To Add: Emotionally Handicapped

EED 4212	Behavioral Approaches to Classroom Learning II	3
EED 4244	Curriculum for Teaching Students with Emotional Handicaps	3
EED 6226	Advanced Theory and Practice: Emotional Handicaps	3

¹Extensive field work required.

**Educational Specialist in
School Psychology**

The program in School Psychology requires a minimum of 80 semester hours and leads to State of Florida certification as a specialist in School Psychology as well as educational requirements for private practice licensure. This program leads to the Educational Specialist Degree. More complete program descriptions may be obtained in the departmental office or call (305) 348-2552.

The competencies to be demonstrated by the student completing this program are derived from the following: behavioral/educational assessment and planning; counsel-

ing and child-centered consultation with teachers, parents, and agency representatives; staffing, liaison, referral, and case management; program development and evaluation; in-service education; administrative consultation; and community development.

Degree Hours: (80)

EDF 5481	Analysis and Application of Educational Research	3
EDF 6444	Assessment Consultation and Collaboration for Culturally and Diverse Populations	3
EDF 6608	Social, Philosophical and Historical Foundations of Education	3
EDP 6211	Psychological Foundations of Education	3
EDP 6505	Human Development: Child and Adolescent	3
EDP 7993	Behavioral Interventions Research and Evaluation in Education	3
EEX 6227	Educational Assessment of Students with Exceptionalities or	3
SPS 6xxx	Academic and Behavioral Interventions in the Schools	3
EEX 6051	Exceptional Children and Youth	3
EEX 6208	Medical Aspects of Disability	3
EEX 6912	Advanced Theory and Research in Special Education	3
MHS 5400	Counseling Theories and Skills	3
MHS 6410	Behavioral and Cognitive Modification Techniques in Counseling and Education	3
MHS 6411	Advanced Counseling and Consultation: Theory and Practice	3
MHS 6513	Human Interaction I: Group Process and Social Behavior	3

MHS 6630	Program Evaluation in Counseling and School Psychology	3
SDS 5460	Crisis Counseling and Intervention	3
SPS 6191	Psycho-Educational Assessment I: Intellectual	3
SPS 6191L	Psycho-Educational Assessment I: Lab	2
SPS 6192	Psycho-Educational Assessment II: Process	3
SPS 6192L	Psycho-Educational Assessment II: Lab	2
SPS 6193	Psycho-Educational Assessment III: Behavior	3
SPS 6193L	Psycho-Educational Assessment III: Lab	3
SPS 6199	Family-School Collaboration and Consultation	3
SPS 6678	Supervised Field Experience School Psychology	10
SPS 6805	Professional Problems and Issues in School Psychology	3
SPS 6930	Special Topics in Counseling and School Psychology	3

The student is required to enter an internship in School Psychology under the supervision of a field based school psychologist for a period of 1200 clock hours. This internship is a full-time, eight hour day, five day week involvement and students entering the program should plan for it during the final stage of their training. At least 600 hours of the internship must be in a setting from kindergarten to grade 12 in a public school. Other approved internship experiences may include private state approved educational programs or other appropriate mental health-related programs or settings for the education of children and youth.

All students entering the School Psychology track with an undergraduate degree in an area other than education must enroll for the courses in general professional education required to meet certification requirements in the State of Florida. All applicants must also have completed 18 hours of prerequisite undergraduate coursework in psychology with the advice and counsel of an advisor.

Former recipients of the MS degree in School Psychology at this institution may upgrade their degree to the Ed.S. by taking a sequence

of courses approved by the department

Doctor of Education in Exceptional Student Education

The Doctoral Program in Exceptional Student Education offers specialties in the following areas: Administration; Curriculum Development; and Research.

Admission Requirements

The College of Education has common admission requirements for its Doctoral Programs regardless of the specialty sought. Applicants to the program must submit the following records and documents to the Office of Admissions:

1. A completed Application for Graduate Admission with appropriate fees;

2. An official copy of the Graduate Record Exam (GRE) scores.

3. Official transcripts of all higher education institutions attended.

Additionally, applicants must submit the following to the Coordinator of Doctoral Programs in the College of Education.

1. Three letters of reference attesting to the applicants ability to succeed in doctoral study;

2. A current resume/vita;

3. A portfolio that sets forth the applicant's career goals and relates these goals to the completion of the doctoral program. See department application for guidelines.

No action will be taken on incomplete files. A file is considered incomplete if any of the above is missing.

The application and all supporting documentation is reviewed by program faculty. The criteria applied in reviewing the applicant's file are noted below. Exceptions to one or more of the stated criteria may be granted provided the applicant can provide compelling reasons and evidence.

1. A grade point average (GPA) of at least 3.0 (on a 4.0 scale) in upper level undergraduate work;

2. A 3.25 GPA in all graduate work attempted;

3. A master's degree from an accredited institution;

4. A minimum combined verbal and quantitative score of 1000 on the GRE;

5. Foreign students must demonstrate a TOEFL score of at least 500.

Upon completion of the review of the file the applicant will be interviewed by program and departmental faculty which comprise a Faculty Admissions Committee. Final decisions are made by the Faculty Admissions Committee and the Dean of the College. As admission to programs is competitive, meeting minimum admission requirements does not assure admission into the program. A candidate for admission to the program will be judged not only on the basis of quantitative criteria (listed elsewhere in this catalog) but also in relation to prior experience, especially as it relates to future career goals. Additional information is available from the Coordinator of Doctoral Programs or Program Faculty.

Professional Studies Core: (6)

EDP 7008	Educational Psychology: Advanced Applications	3
EDF 7937	Advanced Topics in Social Foundations of Education	3

Special Education Core: (18)

EEX 7930	Professional Seminar in Special Education (<i>repeated 6 times</i>)	1
EEX 6912	Advanced Theory and Research in Special Education	3
EEX 6535	Seminar in Special Ed.: Supervision and Leadership	3
EEX 7977	Candidacy Research and Evaluation in Special Education	3
EEX 7964	Comprehensive Examination	0

Research Methods and Statistics: (12)

STA 6166	Statistical Methods in Research	3
EDF 6486	Research Methods in Education: Experimental Design and Analysis	3
EDP 7058	Behavioral Intervention Research and Evaluation in Education	3
EDF 6403	Quantitative Foundations of Education	3
	or	
EDF 6475	Qualitative Foundations of Educational Research	

Cognate or Minor Area of Study (15-18)

Course work in a career emphasis including: Administration and Supervision, Educational Psychology, or a self-designed minor area of study.

Dissertation Study (24)

EEX 7980 Doctoral Dissertation 24

Other Requirements:

Leadership competency activities, candidacy research, candidacy examination, residency (18 credits within one calendar year), dissertation proposal, dissertation, oral defense of dissertation.

Doctoral Cognate in Educational Psychology

The doctoral cognate in Educational Psychology provides advanced professional development for students already working toward the Doctor of Education in a number of majors available within the College.

The cognate prepares students in one of three areas of educational psychology: 1) learning and instruction, 2) individual differences in development, and 3) measurement and assessment. The cognate provides students with foundational and advanced applications of psychology by offering alternative programs of study. It also gives students the opportunity to work with faculty members in educational psychology, school psychology, school counseling, mental health, and special education programs and departments. A student who completes the cognate in Educational Psychology at the doctoral level is expected to be able to: a) apply psychological principles to contemporary issues in education; b) seek ways to improve educational practice, evaluation, and assessment; c) develop innovative and facilitative teaching/learning procedures at all developmental levels; and d) analyze the major psychologically based programs for educational reform. The cognate assists doctoral students to design research in their individual fields of study.

Course Requirements

Required Core (9 credits)

EDP 6215	Applications of Learning Theory to Instruction	
	or	
EDP 6301	Cognitive Psychology in Education	3

EDP 6505	Human Development: Childhood and Adolescence	
	or	
EDP 6506	Human Development: Adulthood and Aging	3
EDF 5432	Measurement and Evaluation in Education	
	or	
EDP 7058	Behavioral Intervention Research and Evaluation	3

Option 1: Learning and Instruction (9 credits)

Select THREE of the following courses:

EDP 6301	Cognitive Psychology in Education	
EDP 6211	Educational Psychology: Principles and Applications	
EDG 7362	Instruction: Theory and Research	
EEX 6608	Applied Behavior Analysis in Education	
EDP 6186	Social Development and Learning	
EAB 5098	Proseminar in Behavior Analysis	

Option 2: Individual Differences in Development (9 credits)

Select THREE of the following courses:

EDP 6505	Human Development: Childhood and Adolescence	
EDP 6506	Human Development: Adulthood and Aging	
DEP 5608	Theoretical Perspectives Development	
CHD 5266	Advanced studies in Child Development	
DEP 5405	Proseminar in Adulthood and Aging	
DEP 5056	Issues In Life-span Developmental Psychology	
DEP 5069	Applied life-span Developmental Psychology	
EAB 6707	Developmental Behavior Analysis	

Option 3: Measurement and Evaluation (9 credits)

Select THREE of the following courses:

EDF 6212	Research Problems in Educational Psychology	
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MHS 6630	Program Evaluation in Counseling and School Psychology
EDP 7058	Behavioral Intervention Research and Evaluation
MHS 6200	Measurement and Appraisal in Counseling
CYP 6526	Psychological Methods of Program Evaluation
CLP 6437	Behavioral Assessment in Childhood
DEP 5796	Methods in Developmental Psychology
EDP 7977	Candidacy Research and Evaluation

Note: All DEP courses have DEP 3000 Human Growth and Development as prerequisite. All EDP courses have EDP 3004 Introduction to Educational Psychology as prerequisite. EHB 4601 Applied Behavior Analysis (or equivalent) is a prerequisite for EAB 6707.

Certificate and Add-On Certification Programs

The Department offers Professional Certificate Program in Specific Learning Disabilities, Emotional Disturbance, and Mental Retardation.¹

In order to meet the needs of teachers not wishing to enter a Master's Degree program, but who wish to complete state certification in a sequential and planned program of study, the University has established three Professional Certificate Programs: Specific Learning Disabilities, Emotional Disturbance, and Mental Retardation. The entrance requirement is eligibility for or possession of a Florida Teaching Certificate in elementary education.

In the event a student enrolled in the Professional Certificate Program elects to apply course work taken toward meeting the requirements for a Master of Science Degree, the student must follow the stipulated entrance procedures for the Master's Degree program.

Specific Learning Disabilities

ELD 4230	Curriculum for the Learning Disabled	3
ELD 4240	Strategies for Teaching Students with Learning Disabilities ¹	3
ELD 6323	Advanced Theory and Practice: Learning Disability	

EEX 6051	Education of Students with Exceptionalities	3
EEX 6106	Acquisition of Speech and Language Skills	3
EEX 6227	Educational Assessment of Students with Exceptionalities	3
EEX 6608	Applied Behavioral Analysis in Education	3
EEX 6771	Independent Living for Students with Exceptionalities	3

Emotional Disturbance

EED 4212	Behavioral Approaches to Classroom Learning II	3
EED 4243	Strategies for Teaching Students with Emotional Handicaps ¹	3
EED 4244	Curriculum for Teaching Students with Emotional Handicaps	3
EED 6226	Advanced Theory and Practice: Emotionally Handicapped	3
EEX 6051	Education of Students with Exceptionalities	3
EEX 6106	Acquisition of Speech and Language Skills	3
EEX 6227	Educational Assessment of Students with Exceptionalities	3
EEX 6608	Applied Behavioral Analysis in Education	3
EEX 6771	Independent Living for Students with Exceptionalities	3

Mental Retardation

EEX 4601	Behavioral Approaches to Classroom Learning	3
EEX 6051	Education of Students with Exceptionalities	3
EEX 6106	Acquisition of Speech and Language Skills	3
EEX 6227	Educational Assessment of Students with Exceptionalities	3
EEX 6608	Applied Behavioral Analysis in Education	3

EEX 6771	Independent Living for Students with Exceptionalities	
EMR 4221	Curriculum for Teaching Students with Mental Retardation	3
EMR 4362	Strategies for Teaching Students with Mental Retardation ¹	3
EMR 6852	Advanced Theory and Practice: Mental Retardation	3

¹Extensive field work required.

Program for School Guidance and Counseling Certification

To provide a systematic curricula as a means of obtaining the Florida Guidance Counselor (PK-12) Certificate for those who already possess a master's degree in Education or Counseling and do not wish to pursue a second master's degree.

Admission Requirements

Application for admission is to be made to the Department of Educational Psychology Graduate Admissions Committee. The criteria for admissions includes: possession of a master's degree in Education, Counseling or other approved area, transcripts of all college credits, autobiographical form, and three letters of recommendation.

Required Program: (33)

SDS 6700	Organization and Administration of School Counseling	3
MHS 6200	Measurement and Appraisal in Counseling	3
MHS 5350	Educational-Vocational Counseling	3
MHS 6410	Behavioral and Cognitive Modification Techniques in Counseling and Education	3
EDP 6211	Psychological Foundations of Education	3
MHS 5400	Counseling Theories and Skills	3
MHS 6511	Group Counseling	3
MHS 6411	Advanced Counseling and Consultation: Theory and Practice	3

(Prerequisite: MHS 5400 and MHS 6410)

SDS 6784	School Law for Student Service Workers	3
MHS 6428	Cross Cultural Counseling	3
MHS 6800	Advanced Practicum in Counseling and Consultation (Prerequisite: All the courses listed above)	3

Note: At the discretion of the program coordinator, a minimum of six semester hours of transfer credit may be used to satisfy these requirements.

Applications for advanced practica placement (MHS 6800) must have faculty advisor approval and be submitted to the office of the Director of Student Teaching by July 1 for Spring semester placement, and by March 1 for Fall semester placement.

Elementary Education

George E. O'Brien, Associate Professor, *Science Education and Chairperson, Elementary Education*

Maria A. Bilbao, Associate Dean, *Elementary Education*

Mohammed K. Farouk, Associate Professor, *Social Studies Education and Associate Director, Global Awareness Program*

Joyce C. Fine, Associate Professor, *Reading and Language Arts Education*

Robert K. Gilbert, Associate Professor, *Mathematics Education*

Rebecca P. Harlin, Associate Professor, *Early Childhood, Elementary Education*

Sharon W. Kassack, Professor, *Reading Education*

Scott P. Lewis, Assistant Professor, *Science and Elementary Education*

Nancy Marshall, Associate Professor, *Reading and Language Arts Education*

Alicia Mendoza, Associate Professor, *Early Childhood, Elementary Education*

Lynne Miller, Associate Professor, *Reading and Language Arts Education*

Edward M. Reichbach, Associate Professor, *Social Studies Education*

William M. Ritz, Instructor, *Art Education*

Yee P. Soon, Assistant Professor, *Mathematics Education*

Craig Williams, Instructor, *Elementary Education*

Nina Zaragoza, Associate Professor, *Language Arts Education*

General Information

The department of Elementary Education is committed to service to the community and the extension of knowledge through research. The department's programs include:

Master of Science in:

Early Childhood Education
Elementary Education
Reading

Doctor of Education specialties in Curriculum and Instruction degree:

Early Childhood Education
Elementary Education
Reading

All stated admission requirements are to be considered minimums. A student who meets these minimum

requirements is not automatically assured admission. Program admission requirements are subject to change. It is the responsibility of the student to assure that he/she has met the requirements.

It is recommended that students meet with an advisor throughout the program to assure adequate progress.

Master of Science in Early Childhood Education

Applicants for admission to the Master's program in Early Childhood Education must hold or qualify for Florida certification or equivalent in early childhood education (including practical teaching experience requirement), and must satisfy requirements for scholastic aptitude as determined by the graduate admissions standards: GPA of 3.0 or 1000 (sum of verbal and quantitative) on GRE. Applicants must submit GRE scores.

Degree Hours: (36)

Required Courses:

EDF 5481	Analysis and Application of Educational Research	3
EDF 6608	Social and Philosophical Foundations of Education	3
EDP 6211	Psychological Foundations of Education	3
EEC 6261	Education Programs for Younger Children	3
RED 6305	Instruction in Early Childhood Reading	3
MAE 6305	Instruction in Early Childhood Mathematics	3

Specialization Courses

Courses to be selected from among Early Childhood course listings, in consultation and with approval of program advisor. 18

Master of Science in Elementary Education

Applicants for admission to the Master's program in Elementary Education must: hold or qualify for Florida certification or equivalent in elementary education (including practical teaching experience requirement), and satisfy requirements for scholastic aptitude as determined by the graduate admissions standards: GPA of 3.0 or 1000 (sum of verbal

and quantitative) on GRE. The applicants must submit GRE scores.

Degree Hours: (36)

Required Courses:

EDE 6205	Curriculum Design for Childhood Education	3
EDF 5481	Analysis and Application of Educational Research	3
EDF 6608	Social and Philosophical Foundations of Education	3
EDP 6211	Psychological Foundations of Education	3
RED 6155	Instruction in Elementary Reading	3
MAE 6318	Instruction in Elementary Mathematics	3
LAE 6355	Instruction in Elementary Language Arts	3
ARE 6315	Instruction in Elementary Art	3
SSE 6355	Instruction in Elementary Social Studies	3
MUE 6315	Instruction in Elementary Music	3
SCE 6315	Instruction in Elementary Science	3
EDE 6948	Graduate internship in Elementary Education	3

Master of Science in Reading

The Master of Science in Reading develops competencies in diagnosis and remediation, teaching of reading K to 12, and administration and supervision of remedial, corrective, developmental, and content area reading programs. The graduate is competent to take leadership in improving reading instruction and preventing reading failure in schools or clinics.

Requirements for admission to the Master's program in Reading are completion of an appropriate undergraduate teacher education program, satisfactory scholastic aptitude, as determined by the graduate admission standards a GPA 3.0 or 1000 (sum of verbal and quantitative) on the GRE; applicants are required to submit GRE scores. Applicants must have taught for a minimum of three years prior to receiving the Master's degree in Reading.

Standard Track

This master's track is designed to meet the needs of students interested in reading assessment and instruction. This track and the thesis track both lead to state certification.

Degree Hours: (36)

Required sequence of courses:

RED 6155	Instruction in Reading	3
EDF 6606	Social, Philosophical and Historical Foundations of Education ¹	3
LAE 5415	Children's Literature	3
EDP 6211	Psychological Foundations of Education ¹	3
LAE 6355	Language Arts	3
RED 6336	Content Area Reading	3
RED 6546	Reading Diagnosis	3
RED 6515	Reading Remediation	3
RED 6932	Special Topics in Reading: Classroom Action Research	3
EDF 5481	Analysis and Application of Educational Research ¹	3
RED 6805	Practicum in Reading	3
RED 5911	Directed Study or advised elective, TBA with reading advisor	3

¹Professional studies core

Thesis Track

This master's track is designed to meet the needs of students interested in pursuing independent research and provides a special foundation for doctoral degree program entrance. Admission requirements for this program are the same as for the regular Master's degree program. At press time faculty were in the process of revising the Thesis track. For the latest program information please consult program faculty.

Doctor of Education in Curriculum and Instruction

The Department offers Curriculum and Instruction doctoral specialties in Early Childhood Education, Elementary Education and Reading.

Admission Requirements

The College of Education has common admission requirements for its Doctoral Programs regardless of the specialty sought. Applicants to the program must submit the following records and documents to the Office of Admissions:

1. A completed Application for Graduate Admission with appropriate fees;

2. An official copy of the Graduate Record Exam (GRE) scores.

3. Official transcripts of all higher education institutions attended.

Additionally, applicants must submit the following to the Coordinator of Doctoral Programs in the College of Education.

1. Three letters of reference attesting to the applicants ability to succeed in doctoral study;

2. A current resume/vita;

3. A statement that sets forth the applicant's career goals and relates these goals to the completion of the doctoral program.

No action will be taken on incomplete files. A file is considered incomplete if any of the above is missing.

The application and all supporting documentation is reviewed by program faculty. The criteria applied in reviewing the applicant's file are noted below. Exceptions to one or more of the stated criteria may be granted provided the applicant can provide compelling reasons and evidence.

1. A grade point average (GPA) of at least 3.0 (on a 4.0 scale) in upper level undergraduate work;

2. A 3.25 GPA in all graduate work attempted;

3. A master's degree from an accredited institution;

4. A minimum combined verbal and quantitative score of 1000 on the GRE.

5. Foreign students must demonstrate a TOEFL score of at least 500.

Upon completion of the review of the file the applicant will be interviewed by program and departmental faculty which comprise a Faculty Admissions Committee. Fi-

nal decisions are made by the Faculty Admissions Committee and the Dean of the College. As admission to programs is competitive, meeting minimum admission requirements does not assure admission into the program. Additional information is available from the Coordinator of Doctoral Programs or Program Faculty. A candidate for admission to the program will be judged not only on the basis of quantitative criteria (listed elsewhere in this catalog) but also in relation to prior experience, especially as it relates to future career goals.

Curriculum and Instruction Core Courses: (12)

EDG 7222	Curriculum: Theory and Research	3
EDG 7362	Instruction: Theory and Research	3
EDG 7665	Seminar in Curriculum	3
EDF 7934	Seminar in Social Foundations of Education	3

Professional Education Core (6)

EDF 7937	Advanced Topics in the Social Foundations of Education ¹	3
EDP 7008	Educational Psychology: Advanced Applications	3

¹All doctoral students must enroll in EDF 7937 within their first year of admission.

Specialty Area: (36)

The specialty areas include art education, early childhood education, elementary education, English education, instructional leadership, mathematics education, music education, reading education, science education, and social studies education.

Cognate Area: (18)

The cognate area requires a minimum of 18 semester hours of course work in a single area of study related to the specialty. The courses should be chosen with regard to coherence and relevance to the anticipated substantive aspect of the dissertation and in consultation with the advisor. The cognate area may be taken in the other departments of the College of Education, in the College of Arts and Sciences, or any other area offering courses relevant to the student's program.

Research and Statistics: (9)

Required Courses

STA 6166	Statistical Methods in Research	3
EDF 6486	Research Methods in Education: Design and Analysis ¹	3

¹Prerequisite: EDF 5481 and STA 6166.

One of the following:

EDF 6403	Quantitative Foundations of Educational Research	3
	or	
EDF 6475	Qualitative Foundations of Educational Research	3

Candidacy Examinations and Advancement to Candidacy

The student must successfully pass candidacy examinations covering coursework and also submit copies of a dissertation proposal, which has been approved by the supervisory committee, to the Dean of the College and to the Dean of Graduate Studies.

Dissertation (24)

The student is responsible for a minimum of 24 semester hours of dissertation credits. The dissertation must be an original contribution to knowledge in an area of early childhood education, elementary education, secondary education, one of the K-12 areas, or in instructional leadership.

The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum of six credit hours of dissertation are taken each semester the dissertation is being prepared. Continuous enrollment in dissertation study is required (including Summer semester).

EDG 7980	Doctoral Dissertation	24
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Graduate Professional Certificate Program in Reading and Language Arts

The Reading and Language Arts Certificate Program enables teachers to extend their competence in reading and language arts instruction. Completion of the Certificate

Program qualifies the teacher to receive Florida State Certification in Reading, grades K-12. Entrance requirements are an introductory reading course, and a 2.75 GPA in the last two years of college work. Students are required to have completed two years of full-time teaching prior to completing the program. Applicants should apply directly to the Director of the Reading Program.

Prerequisite Course

RED 6155	Instruction in Elementary Reading	
	or	
RED 6305	Instruction in Early Childhood Reading	3

Required Program

EDF 5432	Measurement and Evaluation in Education	3
LAE 5415	Children's Literature	3
LAE 6355	Instruction to Elementary Language Arts	3
RED 6546	Diagnosis of Reading Difficulty	3
RED 6515	Programs of Remediation in Reading	3

Advised Electives¹

Two courses chosen from language-related courses offered outside of the College of Education 6

¹Elective courses are chosen from an approved list in consultation with a Reading Program advisor.

Health, Physical Education and Recreation

Robert M. Wolff, Associate Professor, and Chairperson, Parks and Recreation Management and Sport Management

Laura Blitzer, Assistant Professor, Physical Education

Judith A. Blucker, Professor, Physical Education, and Acting Dean, College of Health

Charmaine DeFrancesco, Associate Professor, Physical Education and Sport Management

Richard Lopez, Associate Professor, Exercise Physiology

Debra R. Trigoboff, Instructor, Sports Medicine

Bill Yongue, Assistant Professor, Elementary Physical Education

The Department of Health, Physical Education, and Recreation offers programs leading to the Master of Science degree in Health Education, with a track in Exercise Physiology; Parks and Recreation Management, with tracks in Leisure Service Management and Recreational Therapy; and Physical Education with tracks in Physical Education Teacher Certification and Sports Management.

The program requirements and descriptions listed below are subject to change without notice. Program faculty should be consulted for academic advisement.

All stated admission requirements are subject to change and should be considered minimums. A student who meets these minimum requirements is not automatically assured admission. It is the responsibility of the student to ensure that he/she has met the requirements.

Master of Science in Health Education

Exercise Physiology Specialization

The graduate specialization in exercise physiology is designed to prepare individuals to work in the fields of exercise testing in a supervisory capacity and in cardiac rehabilitation as a designer of exercise rehabilitation programs.

The program will focus on the physiological effects of exercise and training with application to the improvement of health and functional capacity of hospitalized and non-hospitalized individuals with

heart disease. The program will emphasize the role of exercise in diagnosis, prevention, and rehabilitation of heart disease.

The program will enable students to develop the competencies required by the American College of Sports Medicine for certification as an Exercise Specialist, a Health Fitness Director, and a Program Director. Provisions will be made to enable those students entering the program without an Exercise Test Technologist Certification and a Health/Fitness Instructor Certification to develop those prerequisite competencies.

Admission Requirements

An applicant for admission to graduate study must meet the existing criteria set forth by the Florida Board of Regents. Presently, these are a 3.0 GPA in the third and fourth year of the undergraduate program, or a combined score of 1000 on the GRE (verbal and quantitative sections), or completion of a master's degree program at an accredited university. All applicants must submit a GRE test score.

Prerequisite Classes

One class in each of the following areas: exercise physiology, kinesiology, anatomy, physiology, and nutrition.

Degree Hours: (30)

Exercise Physiology/Sports Medicine Requirement

PEP 5116	Exercise Specialist	3
PET 5625	Sports Medicine	3
PET 6775	Health Fitness Director	3
PET 6785	Exercise Program Director	3

Physiology/Biochemistry/Special Topics Requirement

PCB 4703	Human Systemic Physiology	3
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or

An approved alternative

and

A second approved course in physiology, biochemistry, special topics or nutrition 3

Research Requirement

Advisor approved course in research	3
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Internship Requirement

PET 6940	Internship in Exercise Physiology ¹	3
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Advisor approved electives² (0-6)

¹Students presently employed in the field in an administrative capacity may be exempted from this requirement.

²Students who have not taken PET 5387 Exercise Test Technology and PEP 5115 Fitness Instructor or who do not have ACSM certifications in these areas must take these classes as part of their required program of study. Students who have the classes or the certifications will enroll in advisor approved electives.

Master of Science in Parks and Recreation Management

The graduate program in Parks and Recreation Management is planned to provide advanced preparation for administrative and supervisory level positions within a leisure services delivery system and recreational therapy services. The program includes electives which give flexibility regarding an individual's specific career goals as a future practitioner in parks and recreation management or recreational therapy services.

The Recreational Therapy track is designed to prepare direct service and administrative personnel engaged in recreational therapy service delivery.

Admission Requirements

To enter the program in Parks and Recreation Administration, a student must have a 3.0 GPA in upper division work or score 1000 or higher on the Graduate Record Examination, possess a bachelor's degree, and have appropriate undergraduate preparation in recreation or recreational therapy.

Degree Program: (30-36)

Required Core: (15)

LEI 5510	Program Administration in Parks and Recreation	3
LEI 5595	Seminar in Parks, Recreation, and Sports Management	3
LEI 5605	Philosophical and Social bases of Parks and Recreation	3
STA 6166	Statistical Methods in Research I	3

Select from one of the following two tracks: (18-19)

Leisure Service Management Track

LEI 5907	Directed Study in Parks and Recreation Management	3
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Advised Electives 15

A student who did not complete a Parks, Recreation, Leisure or Sports oriented internship/field experience during his or her undergraduate degree curriculum will be required to take:

LEI 6922	Supervised Field Experiences in Parks and Recreation	6-9
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Recreational Therapy Core (9)

LEI 5716	Program Planning in Therapeutic Recreation	3
LEI 5719	Client Assessment, Evaluation, and Documentation	3
LEI 6725	Administrative Aspects of Therapeutic Recreation	3

Thesis Option:

LEI 6971	Thesis: Recreational Therapy	6
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Total Hours Thesis Option: 30

Non-Thesis Option:

LEI 5907	Individual Study in Parks and Recreation Management	3
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Advised Electives 9

Total Hours Non-Thesis Option: 36

Students not currently certified as Therapeutic Recreation Specialists must also register for the following course as part of their overall program:

Prerequisites: Individuals not currently certified at the professional level (CTRS) by the National Council for Therapeutic Recreation Certification will be required to take the following content courses for completion of the Therapeutic Recreation graduate curriculum.

Introduction to Therapeutic Recreation
Disabling Conditions and T.R. Services
Recreational Therapy Interventions
Abnormal Psychology
Anatomy
Physiology
Human Growth and Development

LEI 6922	Supervised Field Experiences in Parks and Recreation	6-9
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Master of Science in Physical Education

The Master of Science degree program in Physical Education is designed to provide advanced preparation for teachers of physical education. Applicants must hold or qualify for Florida Teacher Certification in Physical Education and must satisfy requirements for scholastic aptitude as determined by the graduate admission standards: GPA of 3.0 or 1000 on the GRE, or both. Applicants must submit GRE scores.

Degree Hours: (33)

Professional Education: (9)

EDF 5481	Analysis and Application of Educational Research	3
EDF 6608	Sociological, Philosophical, and Historical Foundations of Education	3
EDP 6211	Educational Psychology: Foundations and Application	3
PET 5216	Sports Psychology	3
PET 5238	Motor Learning	3
PET 5256	Sociology of Sport	3
PET 5625	Sports Medicine	3
PET 5436	Physical Education Curriculum	3
PET 6597	Survey of Research in Physical Education and Sports	3
PET 6932	Seminar in Physical Education	3
Electives		3

Sport Management Track

The purpose of this track is to provide an option for persons seeking a master's degree in an allied (non-teaching) career in physical education. This degree program would primarily be for persons who do not presently hold Florida teaching certification credentials. Consequently, completion of this degree would not provide such teacher certification for the degree recipients. Examples of potential student clientele would include all foreign and American college graduates with bachelor's degrees in physical education, sports science, business, recreation, and other related areas.

Admission Requirements

Students must hold a bachelor's degree from an accredited university. The published university requirements for admission into the master's degree programs must be met. Students who do not have an undergraduate major in physical education or a related area are responsible for meeting the prerequisites for any course listed in the program's curriculum. A program advisor must be consulted regarding completion of degree requirements.

Degree Hours: (33)

STA 6199	Statistical Methods in Research	3
PET 5216	Sports Psychology	3
PET 5256	Sociology of Sport	3
LEI 6577	Leisure Service Marketing	3
PET 6944	Supervised Field Experience	3-6
PET 6597	Survey of Research in Physical Education and Sports	3
LEI 5503	Law and Liability in Parks and Recreation and Sports	3
LEI 5510	Program Administration Parks Recreation and Sports	3

Advisor approved electives: (6-9)

Please consult with an advisor for appropriate courses.

Subject Specializations

A. Dean Hauenstein, Professor and Chairperson, Technology Education and Vocational Education

Arnilda Badia, Associate Professor, Modern Language Education

David Y. Chang, Associate Professor, Art Education

Myrna P. Crabtree, Professor, Home Economics Education, Vocational Education, Family and Consumer Sciences Education

Gail P. Gregg, Assistant Professor, English Education

Frank T. Hammons, Assistant Professor, Vocational Industrial Education

Zhonghong Jiang, Assistant Professor, Mathematics Education and Computer Education

Luis A. Martinez-Perez, Associate Professor, Science Education

C. Edwin McClintock, Professor, Mathematics Education and Computer Education

Faye C. McNair-Knox, Associate Professor, Modern Language Education

Dominic A. Mohamed, Associate Professor, Vocational Administration and Supervision, Vocational Education

Clem Pennington, Associate Professor, Art Education

Linda Spears-Bunton, Assistant Professor, English Education

Jan L. Tucker, Professor, Social Studies Education, Director, Global Awareness Program

Robert Vos, Associate Professor and Executive Associate Dean, Organizational Training, Vocational Education

The Department of Subject Specializations offers graduate programs leading toward the Master of Science and the Doctor of Education degrees.

Additionally the department offers Alternate Masters Tracks of many of its programs for students who do not hold a bachelors degree in education. These programs lead to State of Florida teacher certification.

Masters of Science Programs

Art Education
English Education
Mathematics Education
Modern Language Education
Music Education

Science Education
Social Studies Education
Technology Education
Vocational Home Economics Education
Home Economic Education Track (non-school based)
Vocational Administration and Supervision
Vocational Industrial Education
Health Occupations Education Track

Doctoral Programs

Curriculum and Instruction
Vocational and Technical Educational Leadership
(a track of the Adult Education and HRD program)

Certificate and add-on certification programs

Graduate Professional Certificate - Health Occupations Education

All stated admission requirements are to be considered minimums. A student who meets these minimum requirements is not automatically assured admission. Program admission requirements are subject to change. It is the responsibility of the student to assure that he/she has met the requirements.

Master of Science Degree Programs

Applicants for admission to most Master's programs in Education must hold or qualify for Florida teacher certification in the appropriate area. All applicants must also satisfy Board of Regents admission requirements. A GPA of 3.0 in the last 60 semester hours of upper division undergraduate study or 1000 (total of verbal and quantitative) on the Graduate Record Examination (GRE). Applicants admitted with a pending GRE score must submit test score within one semester to be fully admitted or become a candidate for graduation. All applicants, regardless of GPA, must submit GRE score.

Art Education

Degree hours: (42)

Education, including Art Education: (21)

EDF 6608 Social, Philosophical, and Historical Foundations of Education 3

EDP 6211 Psychological Foundations of Education 3
EDF 5481 Analysis and Application of Educational Research 3
ARE 6140 Curriculum and Instruction in Art 3
ARE 6262 Organization and Coordination of School and Community Art Programs 3
ARE 6746 Seminar in Art Education: Contemporary Issues and Research 3
ARE 4848 Concepts in Art Education 3
ARE 6925-29 Workshop in Art Education 3

Select one of the following:

EDE 6205 Curriculum Design for Childhood Education 3
or
ESE 6215 Secondary School Teaching Field
or
EEX 6051 Education of Students with Exceptionalities
or
EDS 6050 Supervision in Education
or
EDF 5955 Field Study Abroad
Fine Arts
Art History 3
Studio Art (Three semester hours credit for each studio course) 12

English Education

Degree hours: (36)

EDP 6211 Psychological Foundations of Education 3
EDF 6608 Social, Philosophical, and Historical Foundations of Education 3
EDF 5481 Analysis and Application of Educational Research 3
ESE 6215 Secondary School Curriculum 3
LAE 6339 Teaching English in the Secondary School 3
LAE 6935 Seminar in English Education 3

LAE 5466	Multicultural Perspectives in Language and Literature	3
	or	
LAE 5465	Adolescent Literature	
Teaching field: English		15

Mathematics Education

Degree hours: (33)

EDF 5481	Analysis and Application of Educational Research	3
EDF 6608	Social, Philosophical and Historical Foundations of Education	3
EDP 6211	Educational Psychology: Foundations and Application	3
MAE 5655	Computers in Mathematics Education	3
MAE 6336	Teaching Mathematics in the Secondary School	3
MAE 6899	Seminar in Mathematics Education	3
ESE 6215	Secondary School Curriculum	3
Teaching Field: Mathematics		15

Modern Language Education

Prerequisites

One course in general linguistics or the successful completion of LIN 3010 or LIN 3013.

Degree hours: (36)

EDF 6608	Social, Philosophical, and Historical Foundations of Education	3
EDP 6211	Psychological Foundations of Education	3
EDF 5481	Analysis and Application of Educational Research	3
FLE 6336	Teaching Second Language in the Secondary School	3
FLE 6938	Seminar in Second Language Testing	3
Teaching Field: Modern Language		12

Field Component: (3)

FLE 5908	Supervised Field Experience	3
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Music Education

Degree hours: (35)

Professional Education (9)

EDF 6608	Social, Philosophical and Historical Foundations of Education	3
EDP 6211	Psychological Foundations of Education	3
EDF 5481	Analysis and Application of Educational Research	3

Music Education (12)

MUE 6349	Methodology of Music	3
MUE 6938	Seminar in Music Education	3
MUE 6815	Psychological Foundations of Music Behavior	3
MUE 6785	Research in Music Education	3

Music Courses (3)

Music Literature	3
(Chosen with advisor approval)	
Teaching Field: Music	11

Science Education

Degree hours: (36)

EDF 6608	Social, Philosophical, and Historical Foundations of Education	3
EDP 6211	Psychological Foundations of Education	3
EDF 5481	Analysis and Application of Educational Research	3
ESE 6215	Secondary School Curriculum	3
SCE 6635	Teaching Science in the Secondary School	3
SCE 6933	Seminar in Science Education	3
Teaching Field: Science		12

Biology or chemistry or physics or courses from the following areas with approval of advisor: biology, chemistry, physics, geology, and environmental sciences. (For Junior High Science Teachers).

Advisor Approved Electives	6
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Social Studies Education

Degree hours: (36)

EDF 5481	Analysis and Application of Educational Research	3
EDF 6608	Social, Philosophical, and Historical Foundations of Education	3
EDP 6211	Psychological Foundations of Education	3
SSE 6633	Teaching Social Studies in the Secondary School	3
ESE 6215	Secondary School Curriculum	3
SSE 6939	Seminar in Social Studies Education	3
Teaching Field: Social Studies, Social Science, History		12
SSE 4380	Global Perspectives (required if not already taken)	3
Advisor Approved Elective		3

Master of Science: Alternate Track

The Alternate Track modifies the existing master's degree programs to accommodate candidates with a baccalaureate degree appropriate to the certification area but without certification, who are seeking entry into the teaching profession. This alternate track is no less rigorous than the existing master's degree program, but includes courses which provide the necessary background in professional education together with the master's level academic coursework.

Entry requirements include a bachelor's degree or a strong minor (30 hours with a 3.0 or higher in the major subject area) in a certifiable teaching area such as the following: Art Education, English Education, Mathematics Education, Modern Language Education, Music Education, Science Education, Social Studies Education and a minimum 3.0 cumulative GPA for the two most recent years of study or a combined GRE score of 1000. In either case, the GRE score must be submitted. In addition to the minimum GPA or the combined GRE score, or both, the applicant must receive an affirmative recommendation from the designated Program Leader, Dean of the College, or his designee following a personal interview.

This degree program requires a minimum of four semester sequence of full-time study which includes two Summer Terms, a Fall and a Spring Term and will consist of 45-48 semester hours, depending on each student's previous academic preparation.

Alternate Track Requirements

All students admitted to this track will complete the following courses as well as the graduate program courses in each of the chosen fields.

EDF 5481	Analysis and Application of Educational Research	3
EDF 5517	Education in American History	3
EDG 5414	Instructional Strategies in Teaching	3
EDG 5414L	Instructional Strategies in Teaching: Laboratory	1
EDP 5005	Educational Psychology: Principles and Applications	3
Special Teaching Lab: Area	Student Teaching (Practicum)	3-6

Applications to student teach are due in the office of the Director of Student Teaching by July 1 for Spring semester placement, and by March 1 for Fall semester placement. Check with the program leader early in program enrollment to determine Fall placement availability. Contact the department for complete program descriptions.

Administration and Supervision of Vocational Education

Admission to the Vocational Administration and Supervision program requires adherence to the general standards as specified in the Admission Requirements for Graduate Students at the University. To be certified in Administration and Supervision in Vocational Education in Florida, a person must have at least three years of successful teaching experience in one of the vocational education areas. While one year of successful teaching will meet the experience requirement for admission to the master's degree program initially, the three-year teaching experience requirement must have been completed either before or at the same time as degree requirements are completed. Each graduate student, in consultation with the advisor, plans a program of study to include a core of professional com-

petence, an area of emphasis, and electives.

Degree hours: (33-36)

EDF 5481	Analysis and Application of Educational Research	3
EDF 6608	Social, Philosophical, and Historical Foundations	3
EDP 6211	Psychological Foundations of Education	3
EVT 5168	Curriculum Development in Vocational Education	3
EVT 5265	Supervision and Coordination of Vocational Education Programs	3
EVT 5664	Community Relations and Resources for Vocational Education	3
EVT 6264	Administration of Local Vocational Education Programs	3
EVT 6930	Seminar in Vocational Education	3
EDA 6061	Introduction to Educational Leadership	3
RED 6336	Reading in the Content Area ¹	3

Area of Professional Emphasis

EVT 6946	Supervised Field Experience	3
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Advisor approved electives: (3-6)

The candidate may select a course (or courses) that will increase administrative and supervisory competencies.

¹Students who have met the reading requirement as undergraduates or through approved in-service education may substitute an elective for this course.

Health Occupations Education

Degree hours: (33)

EDF 5481	Analysis and Application of Education Research	3
EDF 6608	Social, Philosophical, and Historical Foundations of Education	3
EDP 6211	Psychological Foundations of Education	3

EVT 5168	Curriculum Development in Vocational Education	3
EVT 5769	Evaluation in Vocational Education	3
EVT 6930	Seminar in Vocational Education	3

Area of Professional Emphasis: (9)

EVT 5315	Improvement of Teaching Strategies in Health Occupations and Nursing Education	3
EVT 5317	Occupational Analysis in Health Occupations and Nursing Education	3
EVT 6318	Current Issues in Health Occupations and Nursing Education	3

Advisor approved technical electives: (6)

The candidate is encouraged to select courses that will increase subject area technical competencies, career goals, and teaching certification requirements such as: courses in Nursing, Health Sciences, Health Services, or Public Health.

RED 6336	Reading in the Content Area	3
EME 6405	Computers in the Classroom	3

Home Economics Education (Family and Consumer Sciences Education)

Non-School Based Track

This track focuses on educational leadership of Home Economists presently employed in non-school educational environments and those preparing for such positions.

This program does not lead to State of Florida teacher certification. Admission to this track does not require teacher certification.

Degree hours: (30)

HEE 5335	Trends and Issues in Home Economics Education	3
HEE 6156	Teaching Home Economics in Diverse Environments	3
ADE 5180	Organizational and Community Processes in AE/HRD	3
EDF 5481	Analysis and Application of	

	Educational Research	3
HEE 6915	Research in Home Economics Education	3
HEE 6937	Seminar in Home Economics Education	3

Area of Professional Emphasis (9)

With program advisor's approval, students may select courses in Home Economics subject matter based on professional competencies and related areas needed.

Advisor approved elective (3)

The candidate in consultation with the advisor will make selections on the basis of individual needs and career goals.

Technology Education**Degree hours: (33)**

EDF 5481	Analysis and Application of Educational Research	3
EDF 6608	Social, Philosophical, and Historical Foundations	3
EDP 6211	Psychological Foundations of Education	3
EVT 5650	Trends and Issues in Vocational Education	3
EVT 5168	Curriculum Development in Vocational Education	3
EVT 5769	Evaluation in Vocational Education	3
EVT 6930	Seminar in Vocational Education	3

Area of Professional Emphasis (9)

EIA 5811	Equipment and Facility Planning	3
EIA 6683	Instructional Projects Development	3
EIA 6931	Analysis of Technology Education	3

Advisor approved elective³

EIA 5925	Special Topics	3
	or	
RED 6336	Reading in the Content Area ¹	3

Students are encouraged to select courses that will increase subject area technical competence.

¹Students who have met the reading requirement as undergraduates

or through approved in-service education, may substitute an elective for this course.

Vocational Home Economics Education (Family and Consumer Sciences Education)

Degree hours: (33)

EDF 5481	Analysis and Application of Educational Research	3
EDF 6608	Social, Philosophical, and Historical Foundations	3
EDP 6211	Psychological Foundations of Education	3
HEE 5335	Trends and Issues in Home Economics Education	3
EVT 5168	Curriculum Development in Vocational Education	3
HEE 6156	Teaching Home Economics in Diverse Environments	3
HEE 6915	Research in Home Economics Education	3
HEE 6937	Seminar in Home Economics Education	3

Area of Professional Emphasis: (9)

With program advisor's approval, students may select courses in Home Economics or Family and Consumer Sciences subject matter based on professional competencies needed. The candidate in consultation with the advisor will make selections on the basis of individual needs and career goals.

Vocational Industrial Education

Degree hours: (33-36)

EDF 5481	Analysis and Application of Educational Research	3
EDF 6608	Social, Philosophical, and Historical Foundations	3
EDP 6211	Psychological Foundations of Education	3

EVT 5650	Trends and Issues in Vocational Education	3
EVT 5168	Curriculum Development in Vocational Education	3
EVT 5769	Evaluation in Vocational and Technical Education	3
EVT 6930	Seminar in Vocational Education	3
EVT 5695	International Comp Vocational Education	3

Area of Professional Emphasis: (6)

A student under the direction of an advisor, may develop professional competencies in an area of emphasis through school-based field experiences, seminars, methods courses, workshops, or independent study.

Advisor approved technical electives: (3-6)

The candidate will be encouraged to select courses that increase subject area technical competence.

Doctor of Education Degree Programs

Admission Requirements

The College of Education has common admission requirements for its Doctoral Programs regardless of the specialty sought. Applicants to the program must submit the following records and documents to the Office of Admissions:

1. A completed Application for Graduate Admission with appropriate fees;
2. An official copy of the Graduate Record Exam (GRE) scores.
3. Official transcripts of all higher education institutions attended.

Additionally, applicants must submit the following to the Coordinator of Doctoral Programs in the College of Education.

1. Three letters of reference attesting to the applicants ability to succeed in doctoral study;
2. A current resume/vita;
3. A statement that sets forth the applicant's career goals and relates these goals to the completion of the doctoral program.

No action will be taken on incomplete files. A file is considered incomplete if any of the above is missing.

The application and all supporting documentation is reviewed by program faculty. The criteria applied in reviewing the applicant's file are noted below. Exceptions to one or more of the stated criteria may be granted provided the applicant can provide compelling reasons and evidence.

1. A grade point average (GPA) of at least 3.0 (on a 4.0 scale) in upper level

undergraduate work;

2. A 3.25 GPA in all graduate work attempted;

3. A master's degree from an accredited institution;

4. A minimum combined verbal and quantitative score of 1000 on the GRE.

5. Foreign students must demonstrate a TOEFL score of at least 500.

Upon completion of the review of the file the applicant will be interviewed by program and departmental faculty which comprise a Faculty Admissions Committee. Final decisions are made by the Faculty Admissions Committee and the Dean of the College. As admission to programs is competitive, meeting minimum admission requirements does not assure admission into the program. A candidate for admission to the program will be judged not only on the basis of quantitative criteria (listed elsewhere in this catalog) but also in relation to prior experience, especially as it relates to future career goals. Additional information is available from the Coordinator of Doctoral Programs or Program Faculty.

Research and Statistics: (9)

Required Courses:

STA 6166 Statistical Methods in Research 3

EDF 6486 Research Methods in Education: Experimental Design and Analysis¹ 3

¹Prerequisite: EDF 5481 and STA 6166.

One of the following:

EDF 6403 Quantitative Foundations of Education

or

EDF 6475 Qualitative Foundations of Educational Research

Professional Education Core (6)

EDF 7937 Advanced topics in the Social Foundations of Education¹ 3

EDP 7008 Educational Psychology: Advanced Applications 3

¹All doctoral students must enroll in EDF 7937 within their first year of admission.

Dissertation: (24)

The student is responsible for a minimum of 24 semester hours of dissertation credits. The dissertation must be an original contribution to knowledge.

The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum of six credit hours of dissertation are to be undertaken each semester the dissertation is being prepared. Continuous enrollment in dissertation study is required (including Summer semester).

Curriculum and Instruction

The doctoral program in Curriculum and Instruction offers specialties in the following areas: Art Education, Early Childhood Education, Elementary Education, English Education, Instructional Leadership, Mathematics Education, Modern Language Education, Music Education, Science Education, Reading Education, and Social Studies Education.

Additional Admission Requirements

In addition to the admission requirements stated, the applicant must possess:

1. Career goals in professional education consistent with the objectives of a doctoral program.

2. Appropriate prior work experience.

Core Courses: (18)

EDG 7222 Curriculum: Theory and Research 3

EDG 7362 Instruction: Theory and Research 3

EDG 7665 Seminar in Curriculum 3

EDF 7934 Seminar in Social Foundations of Education 3

EDP 6211 Psychological Foundations of Education 3

EDF 7937 Advanced Topics in the Social Foundations of Education¹ 3

¹All doctoral students must enroll in EDF 7937 within their first year of admission.

Research and Statistics (9)

Specialty Area: (36)

The specialty areas include art education, early childhood education, elementary education, English education, instructional leadership, mathematics education, modern language education, music education, reading education, science education, and social studies education.

Cognate Area: (18)

The cognate area requires a minimum of 18 semester hours of coursework in a single area of study related to the specialty. The courses should be chosen with regard to coherence and relevance to the anticipated substantive aspect of the dissertation and in consultation with the advisor. The cognate area may be taken in the College of Education, in the College of Arts and Sciences, or any other area offering courses relevant to the student's program.

Candidacy Examinations and Advancement to Candidacy

The student must successfully pass candidacy examinations covering coursework and also submit copies of a dissertation proposal, which has been approved by the supervisory committee, to the Dean of the College and to the Dean of Graduate Studies.

Dissertation (24)

The student is responsible for a minimum 24 semester hours of dissertation credits. The dissertation must be an original contribution to knowledge in an area of early childhood education, elementary education, secondary education, one of the K-12 areas, or in instructional leadership.

The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum of six credit hours of dissertation are taken each semester the

dissertation is being prepared. Continuous enrollment in dissertation study (including Summer semester) is required.

EDG 7980 Doctoral Dissertation 24

Modern Languages/ Bilingual Education Specialization

Students are required to enroll in the following courses:

Required Courses (18)

FLE 7761	Research in Modern Languages/ Bilingual Education	3
FLE 7165	Content-Based Language Curriculum Development	3
FLE 7938	Doctoral Seminar in Multicultural Education	3
FLE 6925	Workshop in Second Language Education	3
EDF 5995	Field Study Abroad or	
FLE 5945	Modern Language/Bilingual School Experiences	6

Advisor approved electives (18) select from:

FLE 6336	Methods of Teaching Modern Languages (7-12)	3
LIN 5825	Studies in Bilingualism	3
EDA 6061	Introduction to Educational Leadership	3
EDF 5881	Foundations of Bilingual Education	3
EDA 7069	Educational Policy	3
FLE 5895	Bilingual Education Teaching Methodologies	3
EDG 5757	Curriculum Development for Bilingual Programs	3
EDF 6444	Consultation and Assessment with Culturally and Linguistically Diverse Populations	3
ISL 5142	Curriculum Development in ESL	3
ISL 5371	Special Methods of TESOL	3
LIN 6602	Language Contact	3
EDA 6195	Communication in Educational Leadership	3

Cognate Area (18)

Students must select courses at the 5000, and 6000 levels from the Modern Language Department. If a student has completed a degree in the language, he or she may take three courses in the language and three courses in another educational specialization.

Professional Education Core (6)

Research and Statistics (9)

Dissertation: (24)

An original contribution to the field of Modern Languages/Bilingual education.

EDG 7980 Doctoral Dissertation 24

Vocational and Technical Education Leadership Track

The doctoral track in Vocational and Technical Education Leadership is designed to promote the preparation of highly competent professionals in vocational and technical education.

It is a track within the Adult Education and Human Resource Development doctoral program. Although each curriculum has its own specific objectives, the goals shared by these programs are the improvement of educational practice and stimulation of personal and professional growth toward excellence.

The Doctor of Education degree is conferred on the basis of high scholarship and skill in the application of knowledge from theory and research findings to practical vocational and technical education problems.

Applications for admission to the doctoral program are invited from individuals who are highly motivated and intellectually capable of meeting the challenges of a rigorous doctoral degree program.

Additional Admission Requirements

In addition to the admission requirements stated, the applicant must possess:

1. Career goals in professional education consistent with the objectives of a doctoral program.
2. Appropriate prior work experience.

Program of Study

Doctorate programs of study vary according to the individual needs of the participants and their current or

anticipated professional goals. A typical program will require a minimum of 99 semester hours beyond the baccalaureate degree and will involve the categories of courses noted below. The list should be considered as a sample program rather than an absolute delineation of exact requirements. Actual programs are planned by the participants, their major professor, and doctoral committee.

Program Components

Adult Education and HRD Core¹ 12

Generic Core² 30-36

Professional Education Core 6

EDF 7937	Advanced Topics in the Social Foundations of Education	3
EDP 7008	Educational Psychology: Advanced Applications	3

All doctoral students must enroll in EDF 7937 within the first year of admission.

Vocational and Technical Education Leadership ³	15-21
Research and Statistics	9
Prospectus and Dissertation	24

The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum of six credit hours of dissertation are taken each semester the dissertation is being prepared. Continuous enrollment in dissertation study is required (including Summer semester).

¹Common AE & HRD and V & TEL requirement

²May include up to 36 semester hours of graduate credit from an approved Masters degree program and transfer credit.

³May include AE & HRD courses.

Certificate and Add-on Certification Programs

Graduate Professional Certificate - Health Occupations Education

The overall purpose of the professional certificate program in health occupations education is to enhance the development of basic

teaching skills and/or instructional techniques of health occupations educators. The professional certificate program provides for the continuing education, upgrading or redirection needs of health occupations teachers through planned advisement and professional certificate recognition. The programs are for both undergraduate and graduate, degree or non-degree seeking students.

This 24 semester hour plan is designed to meet the needs of the individual who (1) is occupationally competent in a health field and currently teaching or desires to teach a health occupations subject, (2) holds a teaching certificate or equivalent or bachelor's degree or both including out of field and (3) does not wish to, or is unable to, meet the master's degree entrance requirements necessary to pursue the master's degree.

Prescribed Courses: (24-27)

EVT 5078	Technical Education in American Society	3
	or	
EVT 5650	Trends and Issues in Vocational Education	3
EVT 5168	Curriculum Development in Vocational Education	3
EVT 5769	Evaluation in Vocational and Technical Education	3
EVT 5315	Improvement of Teaching Strategies in Health Occupations and Nursing Education	3
EVT 5317	Occupational Analysis in Health Occupations and Nursing Education and/or	3
ADE 5385	Adult Teaching and Learning	3

Advisor approved electives (6)

A minimum of two courses selected from courses in General Professional and Adult Education, Vocational Education, Health Service Administration or Health Specialty.

Course Descriptions

Definition of Prefixes

ADE - Adult Education; ARE - Art Education; CGS - Computer Applications; CHD - Child Development; EDA - Education: Educational Leadership; EDE - Education: Elementary; EDF - Education: Foundations; EDG - Education: General; EDH - Education: Higher; EDP - Education: Psychology; EDS - Education: Supervision; EEC - Education: Early Childhood; EED - Education: Emotional Disorders; EEX - Education: Exceptional Child, Core Competencies; EGI - Education: Exceptional Child, Gifted; EIA - Education: Technology; ELD - Education: Specific Learning Disabilities; EME - Education: Technology and Media; EMR - Education: Mental Retardation; ESE - Education Secondary; EVT - Education: Vocational/Technical; FAD - Family Development; FLE - Foreign Language Education; HEE - Home Economics Education; HHD - Housing; HLP - Health, Leisure, and Physical Education; HME - Home Management Equipment; HOE - Home Economics; HSC - Health Sciences; LAE - Language Arts and English Education; LEI - Leisure; MAE - Mathematics Education; MHS - Mental Health Services; MUE - Music Education; PEL - Physical Education; PEM - Physical Education Activities; PEO - Physical Education Activities; PEP - Physical Education Activities; PET - Physical Education Therapy; RED - Reading Education; SCE - Science Education; SDS - Student Development Services; SPS - School Psychology; SSE - Social Studies Education; TSL - TESOL.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering; ALT-alternate years; AR-as required.

ADE 5081 Introduction to Adult Education and Human Resource Development (3). Developing rationale for and philosophy of human resource development/adult education; contrasting agencies, program, and curricula; analyzing factors affecting human resource development, differentiating adults and youths as learners; planning and appraising human resource development programs. (F-UP; SS-Brow)

ADE 5383 Instructional Analysis and Design (3). Analyzing models for instructional analysis and design. Identifying the target population, instructional needs, job and task analysis. Developing learning objectives and related design. Prereq-

uisites: ADE 5081, or ADE 5385, or permission of the instructor. (SS-UP; S-Brow)

ADE 5385 Adult Teaching and Learning (3). Differentiating theories of learning in relation to teaching adults; contrasting characteristics of adults as opposed to youth; evaluating the implications of such distinctions in relation to learning situations appropriate for adults. (S-UP; F-Brow)

ADE 5935 Special Topics in Adult Education and Human Resource Development (1). 'Mini-courses' which provide for an examination of special facets of adult education and human resource development. (AR)

ADE 6180 Organizational and Community Processes in AE/HRD (3). Analyzing human resource and community development programs, the processes and implemental strategies; needs assessment objectives, curricula, recruitment, implementation, and evaluation. Prerequisites: ADE 5383 or permission of the instructor. (S-UP; F-Brow)

ADE 6186 Comprehensive Program Evaluation in AE/HRD (3). Development of a comprehensive strategy for evaluating complex educational, training, human resource and organizational development programs. Prerequisites: ADE 6180 or permission of the instructor. (S)

ADE 6195 Designing Education and HRD Programs for Disadvantaged Adults (3). Distinguishing various forms of disadvantage; analyzing forces which inhibit solution; criticizing responses to problems; developing programs, curricula materials, recruitment strategies, and evaluation designs. (SS, alt)

ADE 6260 Management of AE/HRD Programs (3). Analyzing regulations affecting adult education/human resource development, selecting and training staff; selecting organizational patterns; executing managerial responsibilities; administering supportive services; relating training to organization development. (SS-UP; S-Brow)

ADE 6286 Instructional Development and Implementation (3). A systematic approach to developing instructional materials and strategies appropriate to adult and organizational needs. Implementation strategies including instructional delivery skills for adult learning. Prerequisite: ADE 5383. (F-UP; SS-Brow)

ADE 6476 Computer Based Training (3). A basic course in computer based instruction and training. The application of instructional design to CBT, and proficiency in an authoring software. A working knowledge of personal computers is recommended. Prerequisite: ADE 5383 or permission of instructor. (F)

ADE 6674 Trends and Issues in AE/HRD (3). Presentation & analysis of state-of-art trends impacting development of human resources in specific organizations including educational agencies/business & industry/public sector and commerce. Prerequisites: ADE 6180 or equivalent. (F, alt)

ADE 6906 Directed Study in Adult Education and Human Resource Development (1-3). Specialized intensive study in areas of interest to the student. Subject to approval of program adviser. (AR)

ADE 6925 Workshop in Adult Education and Human Resource Department (1-6). Intensive development of selected competencies related to instructional, curricular and/or administrative skills of special interest to students in adult education/human resource development. (AR)

ADE 6930 Seminar in Adult Education and Human Resource Development (1-3). Intensive study of instructional, curricular, and/or administrative principles and practices for the solution of problems of special interest to students in adult education and human resource development. (AR)

ADE 6935 Special Topics in Adult Education and Human Resource Development (1-3). 'Mini-courses' which provide for an examination of special facets of adult education and human resource development (AR)

ADE 6945 Internship in Adult Education or Human Resources Development (3 or 6) Required in masters program in HRD. Internship in organizations according to student's needs & interests. Supervisory visits & conferences are periodically conducted. Prerequisites: ADE 6180, ADE 6260, ADE 6286 or permission of instructor. (F,S)

ADE 7475 Comparative Systems, Strategies and Materials for Adult Education/HRD (3). A review and critique of the prevailing inventory of packaged systems on the market. Examination of assumptions and

problems surrounding their actual usage in local and national organizations. Prerequisites: ADE 6180/ADE 5383. (S)

ADE 7571 Consulting as an Adult Education/HRD Process (3). Examination of use of internal/external consultation in organizations. Strategies for making entry diagnoses interventions achieving internalization of processes outcomes. Prerequisites: ADE 6180, ADE 5383. (SS)

ADE 7772 Review of Research in Adult Education and Human Resource Development (3). A review and synthesis of research & development activities in Adult Education/HRD. Examination of resources/practices/designs & justifications. Assessment of the status of research in this field. Prerequisites: EDF 5481, ADE 5383, ADE 6180. (F)

ADE 7920 Colloquium in AE/HRD (1-6). Lectures & discussions by distinguished educators/social scientists/organizational executives/graduate faculty & students. Colloquia presents specific topics related to issues/trends/designs & applications. (S)

ADE 7964 Comprehensive Doctoral Examination, Adult Education/HRD (0). Comprehensive doctoral examination in the Adult Education/Human Resource Development. Prerequisite: Permission of Major Professor. (F,S,SS)

ADE 7980 Doctoral Dissertation, Adult Education (6-9). Research for doctoral dissertation for those students approved for candidacy in the Adult Education/Human Resource Development Program. Prerequisite: Advancement to Candidacy in doctoral program. (F,S,SS)

ADE 7985 Dissertation Defense, Adult Education/HRD (0). Defense of Dissertation. Prerequisites: Permission of Major Professor and ADE 7980. (F,S,SS)

ARE 5457C Introduction to Computer Art (3). Exploration of the color computer, peripherals and selected software as tools for creating expressive art. Individual imaging projects, lesson plans, readings and presentations required. (AR)

ARE 5553 Introduction to Art Therapy (3). An overview of art therapy as a verbal and nonverbal means of communication with special emphasis on psychodynamic fundamentals

inherent to the process for the purpose of diagnosis, treatment, and intervention for people with special needs. (AR)

ARE 5555C Advanced Art Therapy (3). Examination of strategies, techniques and current theoretical approaches in art therapy. Delineation and application of an individual field experience is required. Prerequisite: ARE 5553. (AR)

ARE 5905 Directed Study in Art Education (1-6). Individual investigation and research in one or more areas of art education. Prerequisite: Consent of professor. (F,S,SS)

ARE 5945 Supervised Teaching: Art Education (6). Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Alternate Track Program and completion of prerequisite coursework in education and subject matter area. Supervised teaching in an elementary or secondary school. (S)

ARE 6140 Curriculum and Instruction in Art (3). Examination of theoretical bases of curriculum development in art education. Analysis of objectives, content, methods, and materials for art instruction in the elementary, junior, and senior high school. (S)

ARE 6262 Organization and Coordination of School and Community Art (3). Procedures for the organization, coordination and evaluation of school, community, and in-service art programs, with particular attention to the urban multi-cultural setting. (F)

ARE 6304 Instruction in Early Childhood Art (3). Elective in masters program in early childhood education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in preschool, kindergarten and primary grades. (F,S,SS)

ARE 6315 Instruction in Elementary Art (3). Elective in masters program in elementary education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in elementary education. (AR)

ARE 6746 Seminar in Art Education: Contemporary Issues and Research (3). Examination of current issues and review of research in art education literature. Delineation and appli-

cation of an individual research problem. Prerequisite: EDF 5481. (SS)

ARE 6925-29 Workshop in Art Education (3). Production and application of materials and techniques in art education, in a laboratory or field setting. (SS)

ARE 7938 Doctoral Seminar in Art Education (3). Advanced doctoral study in current theories and research related to art education. Prerequisites: ARE 6746 and EDF 6486. (F,S,SS)

CHD 5266 Advanced Studies in Child Development (3). Survey of current literature on selected areas, analysis of trends and issues, and investigation of recent research in Child Development. Prerequisites: CHD 3220, CHD 4210 or equivalent. (AR)

CGS 5410 Logo for Educators (3). Aspects of Logo as used by educators. Creative aspects, the language, philosophy, structure, and application. Prerequisite: Computers in Classroom or equivalent. (AR)

CGS 5413 PILOT for Educators (3). Authoring language PILOT for teachers. Designed to develop language and its application to all levels of education. Prerequisite: EME 6405 or equivalent. (AR)

EDA 6061 Introduction to Educational Leadership (3). Introduction to Educational Administration/Leadership as a field of both study and practice. Emphasis is placed on the social, economic, and political context of contemporary educational administration; the organization, governance, and control of American education; and Educational Administration/Leadership as a profession and career. (F,S)

EDA 6063 Administration of Independent Schools (3). A survey course that examines the administration of private schools. (AR)

EDA 6192 Leadership in Education (3). Review, analysis and application of concepts and theories of leadership with emphasis on organizational and environmental factors, group dynamics, and change processes in education. (AR)

EDA 6195 Communication in Educational Leadership (3). Analysis of principles, processes, and techniques of effective communication and public relations in educational leadership. Study of the theory and

practice of school-community relations. (S)

EDA 6225 Labor Relations in Education (3). Examines relations between the school board and its employees. (AR)

EDA 6232 School Law (3). A basic course in school law. Students will understand the law library and its relationship to the school; will demonstrate a knowledge about our legal system; will function in a legal framework; and will identify basic concepts of the law as applied to education. (F,S,SS)

EDA 6242 School Finance (3). Describes and analyzes current and emerging school finance plans; the influence of the courts and federal and state legislation on those plans; the Florida Education Finance Plan; and the budget responsibilities of the school principal. (S)

EDA 6271C Microcomputer Application for Administrators (3). The role of computers in educational administration. Applications generic to effective leadership utilizing computer technology. (F)

EDA 6503 The Principalship (3). Organization and administration of the school; emphasis on competencies necessary for leadership and management of the school center, both elementary and secondary. (F)

EDA 6905 Directed Study in Educational Leadership (1-3). For advanced graduate students wishing to engage in independent study under the direction of a faculty member. Prerequisites: Admission to master's program and permission of program leader and instructor. (F, S,SS)

EDA 6925 Workshop in Educational Administration and Supervision (1-6). Offers an opportunity for experienced school personnel to participate in a problem-solving workshop. (AR)

EDA 6928 Special Topics: School Improvement (1-6). Offers an opportunity for experienced school personnel to participate in a school improvement workshop. (AR)

EDA 6930 Seminar in Educational Leadership (3). Review of selected concepts and competencies in the eight domains of effective educational leadership as prescribed by the Florida Council on Educational Management. (AR)

EDA 6941 Practicum in Educational Leadership (3). Application of theory and research to field-based problems in educational administration/leadership. Prerequisites: Permission of program leader and instructor. (AR)

EDA 6943 Supervised Field Experience (1-6). Supervised field experience appropriate to the student's interests and professional goals. Prerequisites: Permission of program leader and instructor. (AR)

EDA 6945 Colloquium in Educational Administration (3). Examination of selected contemporary policy and practice issues in educational administration and supervision. Repeatable with permission of instructor. (AR)

EDA 7069 Educational Policy (3). Review, analysis, and synthesis of various concepts and models of educational policy formation and implementation. Doctoral students only.

EDA 7103 Theories of Educational Administration (3). Examination of theoretical constructs and models related to the organization and administration of educational institutions. Prerequisite: Admission to doctoral program. Doctoral students only.

EDA 7233 School Law II (3). Examines the area of school law in depth. Prerequisite: EDA 6232. (AR)

EDA 7236 Law and Higher Education (3). Analyzes the legal structure of higher education, including religion, academic freedom, employment, due process, student's rights, desegregation, tort liability, and other issues. (AR)

EDA 7288 Politics of Education (3). Analysis of the political dynamics of educational governance and the political dimension of educational administration. Doctoral students only. (F)

EDA 7550 Administration of Higher Education (3). Analysis of colleges and universities as social organizations with special emphasis on issues of administration, organization, and governance in higher education. (AR)

EDA 7905 Directed Study in Educational Administration and Supervision (1-6). For advanced graduate students wishing to engage in independent study under the direction

of a faculty member. Prerequisites: Admission to doctoral program and permission of program leader and instructor. (F,S,SS)

EDA 7930 Seminar in Educational Administration and Supervision (3). Consideration of critical issues and problems in the administration of educational institutions. Prerequisite: Admission to doctoral program. (AR)

EDA 7937 Special Topics in Higher Education Administration (3). Seminar devoted to the in-depth treatment of selected special topics in theory, research, and practice related to higher education administration. (AR)

EDA 7943 Field Projects (1-6). Participation by advanced graduate students in field projects and studies. Prerequisites: Admission to doctoral program and permission of program leader. (AR)

EDA 7979 Dissertation Research Seminar (3). Designed to provide advanced doctoral students with a knowledge and understanding of the process of dissertation research and writing and of the dissertation defense. Prerequisite: Advanced doctoral standing. (AR)

EDA 7980 Doctoral Dissertation (6-9). Research for doctoral dissertation. Prerequisite: Advancement to candidacy in doctoral program. (F,S,SS)

EDE 5267 Education of the Child in Urban Society (3). For students desiring advanced study in the schooling of inner-city pupils in K-6. Prerequisites: EDF 3723, EDG 3321, EDG 3322. (AR)

EDE 5905 Directed Study in Elementary Education (1-3). Available to undergraduate and graduate elementary majors. Provides for individual investigation in the area of elementary education. Permission of instructor required. (F,S,SS)

EDE 5925 Special Topics in Elementary Education (3) Available to undergraduate and graduate elementary majors. Provides opportunities to develop skills and knowledge under the guidance of a specialist in a selected area. Permission of instructor required. (AR)

EDE 6205 Curriculum Design for Childhood Education (3) Required in masters programs in early childhood, and reading education. A study of curriculum theory, research,

construction and evaluation related to elementary schools. (AR)

EDE 6225 Education Programs for Older Children (3). Required in masters program in elementary education. Programs developed for older children; curriculum trends based on contemporary psychological, educational and sociological research. (AR)

EDE 6488 Research in Elementary Education (3). Elective in masters program in elementary education. Required for students in doctoral program. Research in elementary education and the paradigms associated with this research. Prerequisite: EDF 5481. (AR)

EDE 6930 Seminar in Elementary Education (3). Elective in masters program in elementary education. Required for students in doctoral program. Advanced study of critical issues and problems in elementary education. Prerequisite: EDE 6488. (AR)

EDE 6948 Graduate Internship in Elementary Education (1-6). Field based experiences in elementary education provided. Required in modified masters track. Repeatable. (AR)

EDE 6971 Thesis in Elementary Education (6). Elective in masters program in elementary education. Design and preparation of an original scholarly investigation in elementary education. Prerequisites: EDF 5481, EDE 6488, and consent of instructor. Corequisite: EDE 6930. (F,S,SS)

EDE 7935 Doctoral Seminar in Elementary Education (3). Required for students in doctoral program. Advanced doctoral study of current theories and research related to elementary education. Prerequisites: EDE 6488 and EDE 6930. (AR)

EDF 5216 Effective Learning in the Classroom (3). A behavioral approach to effective teaching techniques, including theoretical background, behavioral definitions, writing effective objectives, and evaluation of effective learning in the classroom. A field experience will be included. (AR)

EDF 5287 Instructional Technology: Systems Approach (3). Development of instructional competencies, with an emphasis on the use of a systems approach in the design, imple-

mentation, and evaluation of programs. (AR)

EDF 5432 Measurement and Evaluation in Education (3). Competencies required for the design, construction or selection, and evaluation of measuring instruments. Prerequisite: EDF 5481. (F,S,SS)

EDF 5481 Analysis and Application of Educational Research (3). Competencies required for the design, implementation, and evaluation of educational research, including: problem formulation and analysis; sample selection; instrument selection; formulation of research design and procedure; and data analysis. (F,S,SS)

EDF 5517 History of Education in the Changing Social and Philosophical Context of the American Republic (3). An historical examination of formal education in the changing social and philosophical context of the American republic. Special focus on school society relationship. (F,SS)

EDF 5812 National Educational Systems: A Comparative Analysis (3). Examination of educational structures and guiding educational objectives in a limited number of both developed and developing countries. Analysis of responses of national educational systems to common educational issues. (S)

EDF 5820 Latin American Education: An Historic and Contemporary Overview (3). Historical and current development of Latin American Education, and analysis of principal forces shaping this development. (AR)

EDF 5821 African Educational Systems: A Comparative Approach (3). Contemporary trends and issues of education in selected independent African countries, with historical analysis of colonial educational policies and practices. (AR)

EDF 5851 Social/Cultural Conflict in Educational Change (3). This course explores radical interpretations of the relationship of education to development in the Third World. Emphasis will be placed on the problem of values conflict and on the use of appropriate educational technologies. (AR)

EDF 5852 Educational Development Issues in Context: A Multidisciplinary Perspective (3). A critical analysis of educational reforms of the past and

the present, drawing on social science research and policy issues in the Third World. Prerequisite: EDF 6850. (S)

EDF 5880 Intercultural Education: National and International Perspectives (3). Analysis of concepts and programs of intercultural and international education. consideration of the role of education in fostering intercultural understanding both nationally and internationally. (F)

EDF 5881 Foundations of Bilingual Education (3). Fundamental theories and models of bilingual education, and information about the historical, philosophical, theoretical and legal background for bilingual multicultural programs in the United States. (AR)

EDF 5905 Directed Study in Education (1-3). The student plans and carries out an independent study project under direction. Topics are to directly relate to content of education courses. Independent study may not substitute for regular course offerings. Prerequisites: Written permission of the chairman of the Division and the approval of the instructor. (F,S,SS)

EDF 5941 Practicum: Urban Elementary Schools (3). Developing teacher competencies for the urban elementary schools. (AR)

EDF 5942 Multicultural Seminar and Practicum in Urban Education (3). Effective methods of educating immigrant and other minority children.. Prerequisite: Current Florida Teaching Certificate. (AR)

EDF 5955 Field Study Abroad (3-6). Development of international and cross-cultural understandings of educational philosophies and systems through planned travel and study abroad. (SS)

EDF 6212 Research Problems in Educational Psychology (3). Critical analysis of research trends and topics in educational psychology with specific relevance to counseling, school psychology, or special education. Students prepare a prospectus for thesis. (AR)

EDF 6301 Cognitive Psychology in Education (3). Review of psychological research and theory pertaining to cognitive development and processes. Applications to education including cognitive strategy training and enhancement or attention and memory. Prerequisite: EDP 6211. (AR)

EDF 6403 Quantitative Foundations of Educational Research (3). Integrative coverage of fundamentals in the general field of educational research with emphasis on utilizing computers for data analysis. Prerequisites: EDF 5481 and EDF 6486, and STA 6166. (AR)

EDF 6444 Consultation and Assessment with Culturally and Linguistically Diverse Populations (3). Issues in consultation and assessment of individuals with culturally and linguistically diverse backgrounds. (AR)

EDF 6475 Qualitative Foundations of Educational Research (3). Introduction to philosophical, historical, sociological, and other methodologies as aspects of qualitative educational research. Prerequisites: EDF 5481 and EDF 6486. (AR)

EDF 6486 Research Methods in Education: Experimental Design and Analysis (3). Competencies required for the design and analysis of complex educational problems, including formulation of pre-experimental, true experimental, quasi-experimental, and factorial designs; and related analysis. Prerequisites: EDF 5481 and STA 6166. (AR)

EDF 6602 Social and Philosophical Foundation of Education: An Urban Perspective (3). Conceptualization and development of education by development of social analysis and ethical decision making. Prerequisites: Admission to Focus/Masters program. (AR)

EDF 6608 Social, Philosophical and Historical Foundations of Education (3). Required of students seeking a regular Masters degree in Education. It will assist students in examining and explaining the differing social context of schooling, the diverse value orientation represented in formal and informal education and the major historical forces shaping schooling in America. (F,S)

EDF 6636 Intercultural Studies: A Qualitative and Quantitative Analysis (3). Interrelationship between race, class, gender, ethnicity, and national origin and their influence in learning. Prerequisites: EDF 5481. (AR)

EDF 6651 International Development Education: Educational Technology, Planning, and Assessment (3). Introduction to the impact of technology in the delivery and management of education. Emphasis is placed on planning, implementation, and as-

essment in developing societies. (AR)

EDF 6654 Macro- and Micro-Planning in Education (3). This course is designed to study the theoretical and methodological foundations of educational planning in the U.S. and other countries. (S)

EDF 6658 Selected Topics in International Development Education: Current Policy Issues and Problems (3). This course is dedicated to the study of contemporary problems and issues in the fields of educational policy, planning, management, implementation, and research in developing societies. (AR)

EDF 6689 Urban Education: Defining the Field (3). Examines the state of urban education and contemporary urban life in America. Prerequisite: Admission to Masters program. (AR)

EDF 6850 International Development Education: Contemporary Planning Models and Techniques (3). Designed to explore the relationship between education and the modernization/development process. Special emphasis on historic/contemporary educational planning models and techniques. Prerequisite: EDF 5481. (S)

EDF 6906 Directed Study in International Development Education (3). Specialized intensive study in areas of interest to International Development Education majors. Prerequisite: Approval of program advisor and instructor. (F,S,SS)

EDF 6925 Special Topics in Urban Education (1-5). An opportunity for school personnel to develop special competencies in teaching in an urban environment. Prerequisite: Permission of instructor. (AR)

EDF 6972 Thesis in International Development Education (3-9). A thesis is required of students in International Development Education which demonstrates the application of their analytical, conceptual, and technical skills to a specific educational development problem. Prerequisite: Final semester standing in the International Development Education Master's degree program. (F,S,SS)

EDF 7656 International Development Education: Innovative Approaches in Educational Planning (3). Introduction to educational planning approaches which stress decentral-

zation. It focuses on new and innovative perspectives which emphasize strategic aspects of educational planning. (S)

EDF 7934 Seminar in the Social Foundations of Education (3). Provides a social and philosophical frame of reference reflecting the society in which education occurs and the resulting implications for the functioning of schools. Prerequisites: M.S. or equivalent and at least one graduate course in history, philosophy or sociology, or equivalent. (AR)

EDF 7937 Advanced Topics in the Social Foundations of Education (3). In-depth, advanced exploration of a specific area, issue, or practice in relation to the evolving social, philosophical and historical context of American schooling. Prerequisite: Doctoral students only. (F,S)

EDG 5325 Analysis of Teaching (3). Examination of the research on instruction in teaching, and the development of skills in the observation and analysis of teacher behavior. (AR)

EDG 5414 Instructional Strategies for the Classroom Teacher (3). This course is specifically designed for the Modified Master's Program in Education. Focus is on generic teaching strategies suitable for teaching in South Florida. Special Emphasis will be placed on the development of competence and knowledge supportive of a reflective practitioner. Prerequisite: Permission of Instructor. Corequisite: EDG 5414L. (F,SS)

EDG 5414L Instructional Strategies Lab (1). Applies basic knowledge and skills necessary for teaching. Required of all in mod-masters programs. Corequisites: EDG 5414. (F,SS)

EDG 5417 Learning Styles Applications (3). Designed to help educators use learning styles information to change instruction and improve student achievement. Prerequisite: Tentative admission to Master's program. (AR)

EDG 5707 Cultural and Cross-Cultural Studies (3). Overview of immigration patterns in U.S., discussions of theories of ethnicity, acculturation, intercultural communication. Development of teaching strategies for multicultural classrooms. Multicultural issues in elementary, secondary, adult, vocational, and special education will also be addressed. (F,S,SS)

EDG 5941 Practicum: Urban Secondary Schools (3). Developing teacher competencies in urban secondary schools. (AR)

EDG 6250 Curriculum Development (3). Development of basic technical constructs of curriculum. Planning of reality-based educational programs at all levels of schooling. (S,SS)

EDG 6286 Curriculum Evaluation and Improvement in Urban School Systems (3). Development of skills in curriculum evaluation and strategies for improvement of on-going curriculum. (S)

EDG 6608 Multicultural Education: Defining the Field (3). Multicultural education and its impact on teaching and the profession. Prerequisite: Admission to Urban masters program. (AR)

EDG 6693 Problems in Curriculum and Instruction: Elementary (3). Investigation of current problems and solutions to essential curricular and instructional issues in elementary education. Prerequisites: EDE 6205, EDE 6225 or equivalent. (SS)

EDG 6694 Problems in Curriculum and Instruction: Middle School (3). Investigation of current problems and solutions to essential curricular and instructional issues in Middle School education. Prerequisite: ESE 6215 or equivalent. (SS)

EDG 6695 Problems in Curriculum and Instruction: High School (3). Investigation of current problems and solutions to essential curricular and instructional issues in high school education. Prerequisite: ESE 6215 or equivalent. (SS)

EDG 6920 Colloquium in Curriculum and Instruction (1-6). Selected readings, presentations and discussions on topics related to curriculum and instruction. Colloquia considers specific topics related to issues, trends and applications in the broad field of education. Prerequisite: Masters Degree. (SS)

EDG 6925, 6926, 6927, 6928, 6929 Special Topics In General Professional Education (1-3). Offers an opportunity for school personnel to participate in a problem-oriented workshop in one of the fields of general professional education. (AR)

EDG 6943 Supervised Field Experience (1-5). Students are provided an opportunity to perform supervisory duties appropriate to the stu-

dents professional goals. Only advanced graduate students are permitted to enroll. (AR)

EDG 7222 Curriculum: Theory and Research (3). Theories of curriculum organization and a survey of curriculum research and historical patterns of curriculum development. Prerequisite: EDG 6250. (F)

EDG 7362 Instruction: Theory and Research (3). Theories of instruction and research in the learning process, creativity, the thought process, human relations and group dynamic and other fields related to the development of instructional theory and practice. Prerequisites: EDG 6250 or Psychology of Learning. (S)

EDG 7391 Seminar in Instructional Leadership (3). Review theories of change and organizational development applicable to education. Discussion of rules and functions of supervisors, curriculum developers and other leaders in the instructional process. Prerequisites: EDS 6115 or EDS 6050. (F)

EDG 7665 Seminar in Curriculum (3). Provides advanced doctoral students the opportunity to participate in a high level seminar focused on identifying the forces which shape curriculum theory and practice. Prerequisite: EDG 7222. (S)

EDG 7938 Doctoral Seminar in Instructional Leadership (3). Advanced doctoral studies in current theories and research related to instructional leadership. Prerequisite: EDG 7391. (F)

EDG 7980 Doctoral Dissertation (3-9). Original contribution to knowledge in major field. Prerequisite: doctoral candidate. (F,S,SS)

EDH 6905 Directed Study in Higher Education (1-6). Specialized intensive study in higher education and/or community college in areas of interest to the student. Subject to approval of program advisor. Prerequisite: Permission of instructor. (F,S,SS)

EDH 6925 Special Topics In Higher Education/Community College (1-6). Intensive development of selected competencies related to instructional curricular, staff development and/or administrative skills of special interest to students in higher education and community college. Prerequisite: Permission of instructor. (F,S,SS)

EDH 6935 Special Topics in Higher Education/Community College (1-6). This course provides for the examination of special aspects of higher education of interest to students in higher education and community college teaching. Prerequisite: Permission of instructor. (F,S,SS)

EDH 7065 Higher Education: Philosophical/Historical Perspectives (3). This course examines basic philosophical positions in higher education; and the history of American higher education. A contemporary philosophical position is then developed. (F)

EDH 7052 Student and Support Services (3). Comprehensive introduction and overview of student affairs in higher education including history, evaluation and growth, philosophical underpinnings, educational significance, administrative aspects and understanding of individual student service areas.

EDH 7204 Higher Education: Community College (3). This course examines the structure of the community college including: curriculum; administration and legal aspects; the community college concept; technical and career programs and current issues and problems. (S)

EDH 7225 Higher Education: Developmental Programs (3). This course examines the spectrum of developmental programs in higher education. Special attention is given to program structure, academic support systems and curricula designed to increase student achievement. (F)

EDH 7307 Higher Education: Instructional Methods (3). This course will develop knowledge of and skill in the use of higher education instructional methods, such as lecture, discussion, demonstration, TV instruction, and computer assisted instruction. (SS)

EDH 7308 Higher Education: Occupational Programs (3). A core course in the doctoral program in higher education: Community College teaching. It is designed to help students develop an in-depth knowledge of occupational programs in community colleges and the students it serves. Prerequisite: Graduate standing. (AR)

EDH 7980 Doctoral Dissertation, Community College Teaching (6-9). Research for doctoral dissertation. Prerequisites: Advancement to can-

didacy in the doctoral program and completion of all other doctoral requirements. Course may be repeated as needed. (F,S,SS)

EDP 5005 Educational Psychology: Principles and Applications (3). Theories, empirical bases and principles of development and individual differences, learning environments, and assessment applied to teaching at all educational levels. Challenges of diversity are emphasized. Required of Modified Masters programs. (SS)

EDP 6211 Psychological Foundations of Education (3). An intermediate course designed to apply theories and principles of learning and development to teaching and student learning in career areas related to education. Challenges of diversity and teacher effectiveness are emphasized. Prerequisites: EDP 3004 or equivalent. (F,S,SS)

EDP 6215 Application of Learning Theory to Instruction (3). Analysis of selected learning theories and application of these theories to an instructional system. (AR)

EDP 6301 Cognitive Psychology in Education (3). Review of psychological research and theory pertaining to cognitive development and processes. Applications to education including cognitive strategy training and enhancement of attention and memory. Prerequisite: EDP 6211 or equivalent. (AR)

EDP 6505 Human Development: Childhood and Adolescence (3). Advanced survey of principles of human development in bio-psychosocial terms; in-depth study of infancy, childhood, adolescence, emphasizes applications to broad range of educational processes. (F)

EDP 6506 Human Development: Adulthood and Aging (3). Advanced survey of life span human development. Demographic, physiological, sociological factors contributing to optimal functioning through adulthood and aging. Applications to counseling and education. (AR)

EDP 7008 Educational Psychology: Advanced Applications (3). Advanced doctoral level seminar. Reviews and applies educational psychology theories and empirical evidence to educational research, program development and policy making at all educational levels. Prerequisite: College of Education doctorate students. (AR)

EDP 7058 Behavioral Intervention Research and Evaluation in Education (3). Design and analysis of observational and behavioral studies in education. Includes single subject research studies, structured observation systems, and behavioral interventions. Prerequisite: EDF 5481.

EDS 6050 Supervision and Staff Development (3). Competencies in supervision and staff development. Focus is on functions, tasks, and job dimensions of educational leaders who serve as supervisors and providers of staff development activities. (AR)

EDS 6115 School Personnel Management (3). Focus is on skills needed for exercising leadership in school personnel selection, evaluation, and development. (S)

EEC 5906 Directed Study in Early Childhood Education (1-3). Available to undergraduate and graduate students studying early childhood education. Provides for individual investigation in the area of early childhood education. Permission of instructor required. (F,S,SS)

EEC 5926 Special Topics in Early Childhood Education (3). Available to undergraduate and graduate students studying early childhood education. Provides opportunities to develop skills and knowledge under the guidance of a specialist in a selected area. Permission of instructor required. (AR)

EEC 6261 Education Programs for Younger Children (3). Required in masters program in early childhood education. Programs developed for young children; curriculum trends based on contemporary psychological, educational, and sociological research. (AR)

EEC 6455 Programming for Young Handicapped Children: Birth to Five Years (3). Acquaint students with developmentally appropriate curricula, methods, materials, intervention strategies, and teaming approaches for infants, toddlers, preschool, handicapped, and at risk children. Prerequisite: EEC 6017; EEX 3010 or EEX 6051 recommended. (AR)

EEC 6678 Research in Early Childhood Education (3). Elective in masters program in early childhood education. Required for students in doctoral program. Research in early childhood education and the para-

digms associated with this research. Prerequisite: EDF 5481. (AR)

EEC 6705 Typical and Atypical Child Development: Birth to Five Years (3). Explore research on normal and atypical child development from birth to five years in physical, intellectual, social, and emotional domains. Field observation required. Prerequisite: none; EEX 3010 or EEX 6051 recommended. (AR)

EEC 6932 Seminar in Early Childhood Education (3). Elective in masters program in early childhood education. Required for students in doctoral program. Advanced study of critical issues and problems in preschool and early childhood education. Prerequisite: EEC 6678. (AR)

EEC 6948 Supervised Experience in Early Childhood Education (3-9). Available to graduate early childhood education majors. Provides field work in educational institutions and organizations involved in child-care and early childhood education. Prerequisite: Permission of Instructor. (AR)

EEC 6971 Thesis in Early Childhood Education (6). Design and preparation of an original scholarly investigation in early childhood education. Prerequisites: EDF 5481, EEC 6678, and consent of instructor. Corequisite: EEC 6932. (F,S,SS)

EEC 7932 Doctoral Seminar in Early Childhood Education (3). Required for students in doctoral program. Advanced doctoral study of current theories and research related to early childhood education. Topics may vary and may include: social, cognitive, affective and language development. Prerequisite: EEC 6678, EEC 6932. (AR)

EED 5225 Strategies for Students with Emotional Handicaps (3). Instructional strategies and specialized approaches for teaching students with emotional handicaps. Extensive field work required. Prerequisites: EDG 5414 and Lab, EEX 6051, EEX 6227, EEX 6608. (AR)

EED 6226 Advanced Theory and Practice: Emotional Handicaps (3). Major theories in the area of behavior disorders, and skills in the application of these theories to education. (S,SS)

EEX 6019 Autism (3). Presents the nature of autism, personal characteristics, patterns of development, and assessment and intervention

strategies. Requires field activity. (AR)

EEX 6228 Integration of Curriculum, Assessment and Instruction (3). This course constitutes the culminating experience in the Masters Program by establishing the link between curriculum, assessment, and instruction. Prerequisite: Completion of required Masters course work. (AR)

EEX 6017 Typical and Atypical Child Development: Birth to Five Years (3). Explore research on normal and atypical child development from birth to five years in physical, intellectual, social, and emotional domains. Field observation required. Prerequisite: EEX 3010 or EEX 6051. (F)

EEX 6051 Education of Students with Exceptionalities (3). Significant concepts in relation to the educational needs of students with exceptionalities. (S,SS)

EEX 6060 Curriculum for Teaching Students with Mild Disabilities (3). Curriculum models, approaches and significant concepts and skills needed for educational planning and programming for students with mild disabilities. Prerequisites: EEX 5481, EEX 6912. (S)

EEX 6065 Educational Programs for Secondary Level Students with Exceptionalities (3). Considers philosophies and models of secondary programs for students with mild disabilities. Emphasis is given to instructional methods in skills and content areas and identification of transition resources. Prerequisites: MAE 6336, RED 6336. (AR)

EEX 6072 Inclusion of Students with Exceptionalities (3). Awareness of issues underlying the movement to include students with disabilities in general education settings. Techniques and procedures for effective mainstreaming of these students. (SS)

EEX 6106 Acquisition of Speech and Language Skills (3). Development of normal speech and language, and knowledge of speech and language delays and disorders. (S)

EEX 6203 Advanced Psychological/Sociological Aspects of Disability (3). Advanced psychological and social aspects of handicapping conditions in relationship to classroom behavior and community functioning. (AR)

EEX 6208 Medical Aspects of Disability (3). Medical etiology and reme-

diation of disability. Includes genetic, biochemical, nutritional, and physical agents in mental retardation, learning disability, and emotional handicaps. Prerequisite: EEX 3202 or equivalent. (F)

EEX 6211 Assessment of Learning and Behavior (3). Presents a model for assessing the skills and abilities of students with exceptionalities. Emphasis is on administration, scoring and interpretation of a variety of standardized tests, and communication of results in written reports and oral staffings. Prerequisites: EEX 3221 or EEX 6227 or equivalent. (AR)

EEX 6213 Assessment and Interventions for Young Children with Disabilities (3). Presents an ecological approach to assessment of young children. Formal/Informal assessment including naturalistic observations and the development of an IFSP and IEP required. Prerequisite: EEX 6017, EEX 3010 or EEX 6051. Corequisites: EEX 6455. (S)

EEX 6227 Educational Assessment of Students with Exceptionalities (3). Presents a model for assessing the academic skills of students with exceptionalities. Emphasis is on use of standardized tests and development of curriculum-based assessments. (F,SS)

EEX 6236 Characteristics of Individuals with Severe Disabilities (3). Characteristics of individuals with physically impaired, health impaired, and profound communication disorders and behavior disorders, including autism. Medical etiology, assessment techniques, program planning for student and family. Prerequisite: Graduate level status. (F)

EEX 6256 Ecological Intervention Strategies for Students with Severe Emotional Disabilities (3). Designed to have the graduate student apply an ecological framework in addition to educational principles to children and youth with behavior disorders. Prerequisite: EED 6226. (S)

EEX 6259 Reading for Students with Exceptionalities (3). Provides teachers with knowledge of specific developmental, remedial reading and language arts strategies, assessment and implementation models that can be used for students with exceptionalities. (SS)

EEX 6417 Guidance and Counseling of Gifted Students (3). Affective development, parental involvement,

counseling theories, underachieving gifted. (SS)

EEX 6455 Programming for Young Children with Disabilities (3). Acquaint students with developmentally appropriate curricula, methods, materials, intervention strategies, and teaming approaches for infants, toddlers, preschool age children with disabilities as well as children at risk. Prerequisites: EEX 6017, EEX 3010 or EEX 6051. Corequisite: EEX 6213. (S)

EEX 6535 Seminar in Special Ed.: Supervision and Leadership (3). Problems in school administration and pattern of curriculum organization as they relate to people with disabilities. Focus on conceptual framework, change factors and future trends in special education. (F)

EEX 6608 Applied Behavior Analysis in Education (3). Application of behavioral principles to children and youth in educational and community settings. Required for special education modified masters' and out-of-field certification majors. Prerequisite: EEX 6051. (AR)

EEX 6765 Instructional Technology for Special Educations (3). Provides teachers of students with special needs current knowledge in instructional technology, appropriate to enhance student learning. (AR)

EEX 6771 Independent Living for Individuals with Disabilities (3). Explores personal living skills, employability and transitional skills for adulthood in relation to persons with mental, sensory and physical disabilities. (SS)

EEX 6846 Seminar in Special Education: Issues and Trends (3). A forum to discuss, analyze, and evaluate current issues and trends in special education. Individual issues and trends will be planned and executed by students. (F)

EEX 6862 Student Teaching (6). Culminating field experience in a program for students with Exceptionalities, demonstrating competencies learned throughout the program. Prerequisite: successful completion of all program requirements. (F,S)

EEX 6863 Supervised Field Experience in Special Education (3-9). Demonstration in a field site of the full range of competencies in diagnostic teaching learned throughout the program. Placements include a variety of field settings. (F,S,SS)

EEX 6906 Directed Study in Special Education (1-6). Concepts or competencies contracted for by graduate students with a faculty member. (F,S,SS)

EEX 6912 Advanced Theory and Research in Special Education (3). Required by graduate students in the Masters or Doctoral programs. Investigation of advanced work in social and psychological research applied to persons with handicaps, mental retardation, learning disabilities, and emotional disturbances. Prerequisite: Certificate in Special Education and/or competence in Special Education. (S,SS) (AR)

EEX 6927 Special Topics in Special Education (1-6). Selected competencies in special education, developed in short-term, intensive workshops. (F,S,SS)

EEX 6971 Thesis in Special Education (3). Elective in Masters Program in special education. Design and implementation of original scholarly investigation in special education. Prerequisites: EEX 6912, EDF 5481, consent of instructor. (AR)

EEX 7977 Candidacy Research and Evaluation in Educational Psychology and Special Education (3). Research activities required for Doctoral student in special education prior to candidacy and dissertation. Serves as a bridge between courses and the comprehensive examination. Prerequisite: Doctoral standing. (AR)

EEX 7930 Professional Seminar in Special Education (1). Required 6 semester seminar for new and continuing doctoral students in leadership and professional development issues facing doctoral professionals. Prerequisite: Doctoral standing. (AR)

EEX 7937 Dissertation Seminar in Special Education (3, repeatable to 9). Designed to take doctoral students through the steps of completing a dissertation. Requires identification and development of a research problem. Prerequisites: Completion of special education core and research and statistics component. (F,S,SS)

EEX 7980 Doctoral Dissertation (6-9). Original contribution to knowledge in major field. Prerequisite: Doctoral candidate. (F,S,SS)

EGI 5051 Nature and Needs of the Gifted (3). Identification and placement procedures, history of the

field, and psychological factors affecting development of the gifted-talented. (F)

EGI 5232 Educational Procedures and Curriculum for Gifted (3). Basic curriculum models in education of the gifted. Relation of models to planning, implementation in traditional classrooms, resource rooms, and special classes. (S)

EGI 6306 Theory and Development in Creativity for Gifted (3). Required for graduate students seeking endorsement in Gifted Education. Knowledge and practice in theory and process of creative thinking and production of creative work. Prerequisite: Graduate level only. (F)

EGI 6405 Special Populations Gifted (3). Required for graduate students seeking endorsement in Gifted Education. Knowledge and theory in cultural, psychological, and educational principles applied to gifted minorities, including the handicapped. Prerequisite: Graduate level only. (SS)

EIA 5811 Equipment and Facilities Planning (3). Utilization of research, design, and technical knowledge and skill to plan and update technology education laboratory facilities and equipment. Prerequisite: Graduate standing. (F)

EIA 5905 Directed Study in Technology Education (1-3). Identification, research, and reporting on problems of interest to the student in technology education. Subject to approval of program advisor. (F,S,SS)

EIA 5925L Special Topics in Technology Education (3). Selected topics related to instructional and technical areas. (F,S)

EIA 6683 Instructional Projects Development in Technology Education (3). Knowledge and skill in developing new and innovative instructional projects for use in technology education programs, grades 6-12. (S)

EIA 6931 Analysis of Technology Education (3). Knowledge of trends, issues, problems in technology education at the national, state, and local levels. (SS)

ELD 5235 Strategies in Teaching Students with Learning Disabilities (3). Instructional strategies and approaches for teaching students with learning disabilities. Extensive field work is required. Prerequisites: EDG

5414 and Lab, EEX 6051, EEX 6227, EEX 6608. (AR)

ELD 6323 Advanced Theory and Practice: Specific Learning Disabilities (3). Major concepts in the area of specific learning disability, and skills in the application of these concepts to education. (S,SS)

EME 5315 Instructional Media (3). Development of competencies for effective selection and utilization of instructional media. Consideration of sources, selection, evaluation, and methods of implementing media. (AR)

EME 5403 Introduction to Instructional Delivery Systems (3). A study of the rapidly expanding electronic media technology and its impact on instructional delivery. Prerequisite: EME 3402 or EME 6405. (AR)

EME 5602 Multimedia in the Classroom (3). Use videodisc and compact disc formats; hypermedia; high resolution still images and graphics; audio-program material and text to improve the quality of teaching and student learning. Prerequisites: EME 3402, EME 6405, or equivalent. Corequisite: Basic knowledge of McIntosh environment. (AR)

EME 5945 Special Topics in Computer Education (1-3). Offers an opportunity for teachers and trainers to participate in activities using specific computer applications. (AR)

EME 6405 Computers in the Classrooms (3). Learning to use microcomputers in a school setting. Emphasis on evaluating and documenting software; creation of classroom materials leading to development of useful software. (F,SS)

EME 6406 Microcomputers as Teaching Tools (3). This course develops ability to use the microcomputer as an object, medium, and manager of instruction in the classroom. Prerequisite: EME 6405 or EME 3402 or permission of instructor. (F,S)

EME 6407C Instructional Programming for Teachers (3). An introductory course for teachers to use BASIC to write educational programs appropriate to the teacher's area of specialization. Prerequisite: EME 3402 or EME 6405 or permission of instructor. (AR)

EME 6412 Educational Courseware Evaluation and Development (3)
This course develops ability to

lect, evaluate, design, and utilize appropriate software for the school curriculum. Prerequisites: EME 6405 or EME 3402 and one computer language or permission of instructor. (AR)

EME 6628 Administrative and Instructional Applications of Technology (3). Topics of this course include data management, instructional management, teleconferencing, scheduling, and productivity software for educational leaders and school managers. (AR)

EME 6905 Directed Study: Computer Education (1-3). The course provides an opportunity for the student to plan and carry out an independent study project under direction. Prerequisite: Permission of instructor. (F,S,SS)

EMR 5215 Strategies for Teaching Students with Mental Retardation (3). Familiarizes students with instructional strategies and specialized approaches for teaching students with mental retardation. Requires extensive field work. Prerequisites: EDG 5414, EDG 5414L, EEX 6051 and EEX 6608. (AR)

EMR 6852 Advanced Theory and Practice: Mental Retardation (3). Major concepts in the area of mental retardation and skills in the application of these concepts to education. (S,SS)

ESE 6215 Secondary School Curriculum (3). Examination of programs, trends, and developments in curriculum and instruction in the secondary school. Consideration and evaluation of innovations. (AR)

ESE 6947 Supervised Field Experience (3-9)(ARR). Field work in an educational institution or organization. Prerequisite: Consent of Program, Faculty and Chairperson of the Department. (AR)

EVT 5078 Technical Education in American Society (3). Knowledge of the basic role and current status of technical education in an industrial democracy. Designed for students interested in post-secondary education. (S)

EVT 5168 Curriculum Development in Vocational Education (3). Knowledge and skill in analyzing, planning, and developing curriculum in an area of specialization. (S)

EVT 5255 Cooperative Vocational Education Programs (3) Knowledge

and skill in the basic philosophy, principles, processes, and procedures of the cooperative method in vocational and technical education. (F)

EVT 5265 Supervision and Coordination of Vocational Education Programs (3). Knowledge and skill in the supervision of personnel and the coordination of work to achieve institutional goals. (F)

EVT 5315 Improvement of Teaching Strategies in Health Occupations and Nursing Education (3). First in series of graduate courses designed to prepare qualified health professionals holding bachelor's degrees with professional education skills necessary to become competent teachers. Approved for "special methods of teaching health occupations education." (AR)

EVT 5317 Occupational Analyses in Health Occupations and Nursing Education (3). Provides opportunity to expand/update the knowledge base of health care system combining experiences in health care delivery system with curriculum updating. Professional licensure and liability insurance required. May be repeated. (AR)

EVT 5369 Vocational Educational Media (3). Knowledge and skill in selecting, developing, and utilizing vocational instructional media forms to communicate or demonstrate concepts. (S)

EVT 5650 Trends and Issues in Vocational Education (3). Knowledge of the basic philosophical and curricular trends and issues in vocational technical education at the international, national, state, and local levels. (F)

EVT 5664 Community Relations and Resources for Vocational Education (3). Knowledge and skill in utilizing community resources and establishing public relations procedures and practices to implement vocational education programs. (SS)

EVT 5695 International Comparative Vocational Education (3). Knowledge in comparison of vocational education in the United States in terms of purposes, systems, and problems with those of selected foreign countries. (S)

EVT 5769 Evaluation in Vocational and Technical Education (3). Knowledge and skill in the development of criteria, tests, measurements, and

analysis of data to assess teaching, learning, and objectives. (F)

EVT 5905 Directed Study in Vocational/Technical Education (1-3). Identification, research, and reporting on a special problem of interest to the student. Subject to approval of program advisor. (F,S,SS)

EVT 5925 Special Topics in Vocational Education (1-6). Selected competencies related to instructional and technical areas. (AR)

EVT 5927 Special Topics in Health Occupations Education (1-3). Selected topics related to instructional and technical areas. (AR)

EVT 6157 Theory of Work and Careers in Vocational and Technical Education (3). Knowledge of concepts and principles of work, careers, and technology and related individual, social, and economic benefits with implications for vocational and technical education. Prerequisite: Graduate standing. (F)

EVT 6264 Administration of Vocational Education Programs (3). Knowledge of the principles, practices, functions, and roles of administration in the operation of vocational education programs. (S)

EVT 6318 Current Issues in Health Occupations and Nursing Education. (3). Designed to focus qualified health professionals holding a bachelor's degree with professional education skills necessary to identify and conduct research on current issues related to teaching in health occupations education. (AR)

EVT 6359 Vocational Education in a Multicultural Setting (3). Knowledge and skill in developing and modifying vocational education programs, materials, and practices for a multicultural setting. (SS)

EVT 6760 Research in Vocational Education (3). Knowledge and skill in identifying, defining, collecting, analyzing, and synthesizing research-related problems in vocational and adult education. (S)

EVT 6925 Special Topics in Vocational Education (1-6). Selected topics related to professional and program areas. (AR)

EVT 6930 Seminar in Vocational Education (3). Discussion of special instructional, curricular and/or administrative and supervisory problems and issues in vocational educa-

tion. Prerequisite: Graduate standing. (F)

EVT 6946 Supervised Field Experience (3-6). Application and refinement of competencies in either classroom, laboratory, or administration and supervision, via school-based field experiences. Placement is subject to approval of program leader. (AR)

EVT 6947 Internship in Vocational Education (3). Knowledge and skill in a new leadership setting, relative to the student's selected area of emphasis. (AR)

EVT 7964 Comprehensive Doctoral Examination, Vocational and Technical Education Leadership. (0). Comprehensive Doctoral Examination in Vocational and Technical Education Leadership. Prerequisite: Permission of major professor. (F,S,SS)

EVT 7980 Doctoral Dissertation, Vocational and Technical Education Leadership. (6-9). Research for doctoral dissertation for those students approved for candidacy in the Vocational and Technical Education Leadership Program. Prerequisite: Advancement to Candidacy in doctoral program. (F,S,SS)

EVT 7985 Dissertation Defense; Vocational and Technical Education Leadership. (0). Defense of Dissertation. Prerequisite: Permission of major professor and EVT 7980. (F,S,SS)

FAD 5260 Family Development (3). Dynamics of family interaction and structure, including analysis of socioeconomic and cultural influences, crisis-producing situations, and current issues and trends affecting the family unit. (AR)

FAD 5450 Human Sexuality (3). Provides a cognitive overview of human sexuality. Main emphasis is on the affective dimension - an exploration of attitudes and values related to sexuality. (AR)

FLE 5895 Bilingual Education Teaching Methodologies (3). Examination of various approaches to bilingual education, including specific school and classroom organizations. Development of specific instructional strategies for bilingual students. Issues in elementary, secondary, adult, vocational, and special education will also be addressed. (F)

FLE 5908 Directed Study in Foreign Language Education (1-3)(ARR). The student plans and carries out an in-

dependent study project under direction. Prerequisite: Consent of instructor. (F,S,SS)

FLE 5945 Supervised Teaching: Modern Languages (6). Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Modified Master's Track Program and completion of prerequisite coursework in education and subject matter area. (F,S)

FLE 6336 Methods of Teaching Modern Language (3). A modern study of language learning and teaching from the theoretical and practical points of view, including the evaluation and development of techniques and materials for second language teaching. Prerequisite: LIN 3010 or ENG 3500 or equivalent. (F,S)

FLE 6925 Special Topics in Second Language Education (1-3)(ARR). Production and application of materials and techniques in second language education in a laboratory or field setting. (S)

FLE 6938 Seminar in Second Language Testing (3). Advanced study and research on current topics and issues in the field of second language education. Variety of topics to include language testing, language proficiency, language and society, bilingual-bicultural education, and error analysis and the language learner. (S,SS)

HEE 5335 Trends and Issues in Home Economics Education (3). Analysis of current social, economic, and educational trends and issues impacting upon home economics education and their implications for current and evolving practices. (F)

HEE 5360 Teaching Child Development (3). Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies. (AR)

HEE 5361 Teaching Consumer Education and Family Economics (3). Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies. (AR)

HEE 5362 Teaching Clothing and Textiles (3). Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies. (AR)

HEE 5363 Teaching Family Life Education (3). Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies. (AR)

HEE 5364 Teaching Housing and Home Furnishings (3). Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies. (AR)

HEE 5365 Teaching Food and Nutrition (3). Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies. (AR)

HEE 5905 Directed Study in Home Economics Education (1-3). Designed for advanced students in home economics education who wish to pursue specialized topics. Requires prior approval of instructor. (F,S)

HEE 5927 Special Topics in Home Economics Education (1-3). Development, organization, instruction, evaluation, and administration of programs related to selected aspects of home economics education. (S)

HEE 6156 Teaching Home Economics in Diverse Environments (3). Utilization of current educational developments, evolving strategies, materials, and resources to teach and evaluate home economics programs in diverse settings. (S)

HEE 6915 Research in Home Economics Education (3). Analysis and application of research pertaining to philosophy, curriculum, evaluation, and teacher education in home economics. Subject to approval of program advisor. (F)

HEE 6928 Special Topics in Home Economics Education (1-3). Development, organization, instruction, evaluation, and administration of programs related to selected aspects of home economics education. (F,S)

HEE 6937 Seminar in Home Economics Education (3). Application of selected instructional, curricular, and/or administrative principles and practices to the solution of problems of special interest to home economics educators. Subject to approval of program advisor. (S,AR)

HES 5319 Teaching Health Education (4). Students will select various modern techniques and tools for teaching health education in elementary and secondary school settings. (AR)

HME 5225 Problems of Home Management in Contemporary Society (3). Influence of diversified cultural impact on management life styles, with emphasis on problems of management resources. Discussion of problems related to single-parent homes, retirement, poverty, death, working parents, migrant families, and other human situations. Prerequisites: COA 2410, HME 4230, or permission of instructor. (AR)

HME 5255 Independent Living for the Handicapped (3). Explores the home and personal living skills required to empower persons with mental and physical limitations to achieve their maximum independence. Suitable for students in special education, health, physical education, recreation, social work, home economics or anyone planning to work with elderly or handicapped. Approved for certification for teachers of the mentally retarded. (AR)

HSC 5455 Basic Driver Education (3). Content includes knowledge of the highway transportation system, rules and regulations. For Driver Education Certification endorsement. (AR)

HSC 5456 Advanced Driver Education (3). Content includes advanced skills for the teaching of driver's education. Prerequisite: HSC 5455. (AR)

HSC 5465 Administration and Supervision of Driver Safety Education (3). Content includes competencies for teacher preparation and improvement in driver and traffic safety education. Prerequisites: HSC 5455 and HSC 5456. (AR)

LAE 5355 Literacy Instruction in the Intermediate Grades (3). Provides understandings, skills, and dispositions needed to teach reading and writing to students who have advanced beyond beginning stages. Required for students in VE Modified Masters Program. Prerequisites: RED 5152 or equivalent. Corequisite: EEX 4940.

LAE 5415 Children's Literature (3). Available to undergraduate and graduate education majors. Provides knowledge and skill in critical analysis of purposes, strategies for teaching and evaluation of chil-

dren's literature. Prerequisites: RED 4150 and LAE 4314, or their equivalent. (AR)

LAE 5465 Adolescent Literature in Middle/Secondary Schools (3). This course examines a wide variety of adolescent and young adult literature. Assists students in the development of instructional strategies for organizing literary experiences among young learners. Prerequisite: Admission into program. (AR)

LAE 5466 Multicultural Perspectives in Teaching Language and Literature for Young Adolescents (3). This course is designed to provide students with a theoretical and practical basis for teaching and reading multicultural literature in the secondary school. Prerequisite: Admission into the program. (AR)

LAE 5908 Directed Study in English Education (1-3) (ARR). The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor. (AR)

LAE 5927 Special Topics in Language Arts (3). Available to undergraduate and graduate education majors. Provides opportunities to develop skills and knowledge of reading/language arts instruction. Permission of instructor required. (AR)

LAE 5945 Supervised Teaching: English Education (6). Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Modified Masters Track Program and completion of prerequisite coursework in education and subject matter area. (S)

LAE 6305 Instruction in Early Childhood Language Arts (3). Elective in masters program in early childhood education. Refines skills related to program development, methods of teaching, selection of materials, and review of research in preschool, kindergarten and primary grades. Prerequisite: LAE 4314 or permission of instructor. (AR)

LAE 6355 Instruction in Elementary Language Arts (3). Elective in masters program in elementary education. Refines skills related to program development, methods of teaching, selection of materials, and review of research in elementary education. Prerequisite: LAE 4314 or permission of instructor. (AR)

LAE 6339 Teaching English in the Secondary School (3). Analysis of

methods, programs, and materials for teaching English in the middle school and senior high school, and development of teaching skills. Prerequisite: Undergraduate course in methods of teaching English. (S)

LAE 6815 Computers in English and the Language Arts (3). Covers the basics needed to integrate computers in teaching language arts. Emphasizes selecting and learning to use software to meet objectives in language, literature, and composition. Corequisite: English major or equivalent. (AR)

LAE 6925-26 Special Topics in English Education (1-3)(ARR). Production and application of materials and techniques in English education in a laboratory or field setting. (AR)

LAE 6935 Seminar in English Education (3). Designed for advanced students, the readings and discussions will focus on policy issues and recent research in English education. Though primarily for experienced English teachers and supervisors, the course is open to administrators and others, with the consent of the instructor. (F)

LAE 7938 Doctoral Seminar in English Education (3). Advanced doctoral study of current theories and research related to English education. Prerequisites: LAE 6935, EDF 6486. (AR)

LEI 5440 Program Development in Parks and Recreation (3). The development of specific programs in parks and recreation with emphasis on special programs for young children, retardates, handicapped persons, and the elderly. (S)

LEI 5503 Liability and Law in Leisure, Recreation and Sports (3). A detailed analysis of legal issues related to leisure service, delivery and sport management including legal foundations, legal liability, disabled services and current case analysis. (S)

LEI 5510 Program Administration in Parks and Recreation (3). A detailed analysis of administrative procedures and responsibilities in connection with parks and recreation facilities and personnel. (F)

LEI 5595 Seminar in Parks and Recreation Management (3). A discussion of current problems, issues, and trends in administration of parks and recreation programs. (F)

LEI 5605 Philosophical and Social Bases of Parks and Recreation Planning (3). Concentration on major phases of pre-design, design, development, actualization of park and recreation facilities. Course will explore funding, budget, site selection, layout, and maintenance. (F)

LEI 5716 Program Planning in Therapeutic Recreation (3). This course is designed to prepare the student for the development of systematically designed therapeutic recreation service delivery programs from the viewpoint of the T.R. specialist and the T.R. administrator. (S)

LEI 5719 Client Assessment, Evaluation and Documentation in R.T. (3). The course addresses client assessment, documentation and evaluation from the direct service perspective, administrative requirements, and health care regulatory agency demands. (S)

LEI 5907 Directed Study in Parks and Recreation Management (3). An opportunity for individuals interested in various aspects of park and recreation administration to work on their own under the close supervision of an advisor. Permission of the instructor is required. (F,S,SS)

LEI 6577 Leisure Services Marketing (3). Advanced application of service marketing principles and practices to both public and private leisure service industry to improve both effectiveness and efficiency of operations. (S)

LEI 6725 Administrative Aspects of Therapeutic Recreation (3). An in-depth examination of issues related to the roles and responsibilities of the Activity Therapies/Therapeutic Recreation Administrator. (S)

LEI 6726 Problems, Issues and Trends in Therapeutic Recreation (3). An elective that provides an examination of current issues, trends and professionalization concerns in therapeutic recreation. (F)

LEI 6727 Disabling Conditions in Therapeutic Activity Services Administration (3). In-depth review of disabling conditions for the development of in-service training in recreational therapy and adapted activity services. (S)

LEI 6816 Leisure Education and Facilitation Techniques for Therapeutic Recreation (3). A focused survey of leisure education and counseling as

applied in therapeutic recreation delivery systems. (F)

LEI 6922 Supervised Field Experiences in Parks and Recreation Administration (3-6). A practical experience for individuals interested in administrative responsibilities. Permission of the instructor and Department Chairperson required. (AR)

LEI 6970 Thesis: Recreational Therapy (3-6). Elective in the Masters Recreational Therapy Track. Design and preparation of an original scholarly investigation in recreational therapy. Prerequisite: EDF 5481. Corequisite: STA 6166. (AR)

MAE 5516 Diagnosis and Remediation in Mathematics (3). Available to undergraduate and graduate education majors. Provides study of symptoms, causes and consequences of children's math difficulties. Supervised case study included. Prerequisite: MAE 4310, or permission of instructor. (AR)

MAE 5655 Computers in Mathematics Education (3). Examines the use of computers (microcomputers) in secondary school mathematics. Designing, evaluating, and using varied types of programs in mathematics classes. Learning to use computers to design mathematics curriculum. (F)

MAE 5908 Directed Study in Mathematics Education (1-3). The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor. (F,S,SS)

MAE 5923 Special Topics in Elementary Math Education (3). Available to undergraduate and graduate education majors. Provides opportunities to produce and apply materials and strategies in math ed in elem and middle schools. (AR)

MAE 5945 Supervised Teaching: Mathematics Education (6). Supervised teaching in a middle or senior high school. Prerequisites: Admission to the Alternate Track Master's Program and completion of prerequisite coursework in education and subject matter area. (S)

MAE 6305 Instruction to Early Childhood Mathematics (3). Required in master's program in early childhood education. Refines skills related to program development, methods of teaching, selection of materials and review of research, in preschool, kindergarten and primary grades. Pre-

requisite: MAE 4310 or permission of instructor. (AR)

MAE 6318 Instruction in Elementary Mathematics (3). Required in masters program in elementary education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in elementary education. Prerequisite: MAE 4310 or permission of instructor. (F,S,SS)

MAE 6336 Teaching Mathematics in the Secondary School (3). Analysis of methods, programs, and materials for teaching mathematics in the middle and senior high school, and development of teaching skills. Prerequisites: Undergraduate secondary math methods and permission of instructor. (S)

MAE 6645C Workshop on Metric Education (1-3). A workshop on Metric Education: trends, teaching strategies, programs and materials. (AR)

MAE 6745 Current Trends and Issues in Mathematics Education (1-3). Trends and Issues in Math Curriculum, new textbooks, curriculum development projects; curriculum implementations and evaluations. Trends and Issues in Instruction, new techniques. Trends and Issues in Evaluations. "New tests", Research. (AR)

MAE 6899 Seminar in Mathematics Education (3). Designed to provide the advanced student with deeper understanding related to mathematics education. (SS)

MHS 5350 Educational-Vocational Counseling (3). Concepts and skills pertaining to vocational development, information systems, career education programs, educational-vocational counseling, and socio-psychological influences on career development. Prerequisite: MHS 5400 (F,S)

MHS 5400 Counseling Theories and Skills (3). Major theoretical concepts in counseling, competencies in relationship-building, interviewing, role-playing, simulation, and micro-counseling (F,S,SS)

MHS 6200 Measurement and Appraisal in Counseling (3). Concepts and skills related to the use of tests and other appraisal procedures in counseling. Particular emphasis on career and vocational choice processes. Laboratory experiences included. Prerequisite: EDF 5481 (F,SS)

MHS 6410 Behavioral and Cognitive Modification Techniques in Counseling and Education (3). Concepts and skills in using behavior modification, contingency contracting, cognitive behavior management, self-instructional training, problem solving skills and parent and/or teacher consultation. (F)

MHS 6411 Advanced Counseling and Consultation: Theory and Practice (3). Extended laboratory experiences stressing the development of behavioral/cognitive intervention skills in short-term counseling and consultation. Prerequisites: MHS 5400 and MHS 6410 or equivalent. (F,S)

MHS 6428 Cross Cultural Counseling (3). Concepts and skills involved in counseling clients with backgrounds different from the majority culture. Prerequisite: MHS 5400. (F,SS)

MHS 6500 Theories in Group Dynamics (3). Systematic examination of various theories and relevant research used in study of small group phenomena. Prerequisites: MHS 5350, MHS 6513. (AR)

MHS 6505 Advanced Group Development Laboratory (3). Development of advanced skills in the analysis and understanding of group process, function, and structures through actual observation of an ongoing group. Prerequisites: MHS 6513, MHS 6514. (AR)

MHS 6511 Group Counseling (3). Exploration of roles and function of group counseling in meeting client needs in a variety of settings. Prerequisites: MHS 5400, MHS 6513, MHS 6514. (AR)

MHS 6512 Organization Development in Education (3). Analysis of theory and practice of organization development and planned change in educational systems. Prerequisites: MHS 6513, MHS 6514. (S)

MHS 6513 Human Interaction I: Group Process and Social Behavior (3). Concepts, research, and theory relative to small group process. Students will participate in small face-to-face task groups, with an emphasis on developing competencies in diagnosis and intervention in small groups. (F,SS)

MHS 6514 Human Interaction II: Analysis of Group Participation (3). Participation in an on-going group with attention given to examination of processes of small group phenomena such as interpersonal communi-

cation, norms, decision-making, leadership, authority, and membership. Prerequisite: MHS 6513. (F,S)

MHS 6519C Principles of Design in Group Intervention: Role of the Consultant (3). Focuses on role of leader or trainer in complex training design in leadership and human relations training. Emphasis on Diagnostic and behavioral skills that help groups become more effective. Prerequisites: MHS 6513, MHS 6514, MHS 6500, MHS 6513. (AR)

MHS 6629 Human Interaction III: Organizational Consultation (3). Theoretical concepts and skills in organizational development and change. Competencies in systems diagnosis and assessment, consultation, agenda setting, team building, decision-making, and feedback. Prerequisite: MHS 6513, MHS 6514. (AR)

MHS 6630 Program Evaluation in Counseling & School Psychology (3). Evaluation skills in the student's area of specialization, including competencies in designing evaluation proposals and conducting an actual program evaluation. Prerequisite: EDF 5481. (S)

MHS 6700 Professional Problems in Counseling (3). Competencies in regard to the development of major role and service models and the application of budgeting systems, legal, and ethical standards in a psycho-educational setting. (F,SS)

MHS 6800 Advanced Practicum in Counseling (3). Advanced competencies in counseling and consultation. Prerequisites: Coursework completion. (F)

MHS 6820 Supervised Field Experience in Counseling (10). Demonstration of the full range of competencies learned throughout the program in Counseling. Internship placements include a variety of field settings. Prerequisites: MHS 6800 and coursework completion. (S)

MHS 6910 Directed Study in Counseling and School Psychology (1-6). Competencies contracted for between a student and an instructor in accordance with the student's individual needs. Permission of instructor required. (F,S,SS)

MHS 6930 Special Topics in Counseling and School Psychology (1, repeatable to 9). Special topics in relation to counseling or school psy-

chology. Permission of instructor required. (SS)

MUE 5907 Directed Study in Music Education (1-3). Individual investigation in one or more areas of music education. (F,S,SS)

MUE 5928 Special Topics in Music Education (2). Applications of materials and techniques in music in a laboratory or field setting. (AR)

MUE 5945 Supervised Teaching: Music Education (6). Supervised teaching. Prerequisites: Admission to the Modified Masters Track Program and completion of prerequisite coursework in education and the subject matter area. (S)

MUE 6305 Instruction in Early Childhood Music (3). Elective in masters program in early childhood education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in preschool, kindergarten and primary grades. (AR)

MUE 6316 Instruction in Elementary Music (3). Elective in masters program in elementary education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in elementary education. (AR)

MUE 6345 The Methodology and Analysis of Music Teaching (3). A data based analysis of methods and programs in the public schools and the development of music pedagogy skills. Reviews current research findings and applies them where applicable to the field of Music Education. Required for the Masters Degree. Prerequisite: Undergraduate Degree. (F)

MUE 6785 Research in Music Education (3). A survey of current research and past research trends in music education. Applied training in techniques of design and data analysis. (AR)

MUE 6815 Psychological Foundations of Music Behavior (3). Overview of acoustical, psychological and physiological foundations of music as it influences human behavior. Covers musical acoustics, anatomy of human hearing, music perception, reactions, personality, mood and powers of music discrimination. Required for the Master of Science in Music Education degree. Prerequisite: Undergraduate degree. (S)

MUE 6925-26 Special Topics in Music Education (1-3). Applications of new, innovative or contemporary materials and/or techniques in music education. May be used for elective credit with permission of the program director. (AR)

MUE 6938 Seminar in Music Education (3). Seminar topics concerning historic music education programs in the United States and other countries, as well as current issues and problems facing the music educator. Required for the Master of Science in Music Education degree. Prerequisites: Undergraduate degree. (S)

PEP 5115 Health/Fitness Instruction (3). Provides the knowledge and skills to evaluate and prescribe health and fitness enhancement programs for healthy adults. Prerequisite: PET 3351. (F)

PEP 5116 Exercise Specialist (3). Provides the knowledge to prescribe exercise for persons with medical limitations, particularly cardiovascular disease. Prerequisites: PET 3351 and PET 5387. (S)

PEP 5117 Fitness for Older Adults (3). The course explores the value of physical activity for improving the physical and mental well being of older adults. Emphasis is placed on exercise prescription and supervision of programs for those working with older adults. Prerequisite: PET 3351. (AR)

PET 5206 Youth Sports (3). Provides insight into the issues surrounding youth sport programs including: program development and analysis, parental influences, relationship of sport to psycho-socio development. (AR)

PET 5216 Sports Psychology (3). Course includes an analysis of psychological variables that influence physical performance. The course is intended for prospective physical educators, coaches, and others interested in motor performance. (S)

PET 5238 Motor Learning (3). The emphasis in this course is on current and advanced topics related to motor skill acquisition. Laboratory practices and applied techniques related to teaching are examined. (F)

PET 5256 Sociology of Sport (3). Students will be introduced to basic principles of the sociological bases of sport and physical activity. (S)

PET 5387 Exercise Test Technology (3). Provides the knowledge and skill required to conduct an EKG monitored graded exercise test. Prerequisite: PET 3351. (F)

PET 5436 Physical Education Curriculum (3). Examination of objectives, content, methods of teaching, and evaluative techniques in physical education. Emphasis on curriculum design and development. (AR)

PET 5447 Curriculum in Physical Education 6-12 (3). To understand the theoretical and practical aspects of designing, developing, and implementing curriculum for the secondary school.

PET 5625 Sports Medicine (3). The class includes topics related to the prevention and treatment of non-traumatic athletic injuries. Practical applications in laboratory experiences required. Prerequisite Exercise Physiology. (S)

PET 5716 Analysis and Observation of Teaching in Physical Education (3). Analysis of the teaching-learning process in physical education. Emphasis on systematic observation instruments and guidelines for systematic development of instructional skills. (F)

PET 5906 Directed Study in Physical Education (1-3). Students will work independently on a topic concerning some phase of physical education or sport under the guidance of a faculty member. Registration is by permission of advisor. (F,S,SS)

PET 5925 Practicum in Physical Education (1-3). Production and or application of materials and techniques for physical education in a classroom and or field setting. (F,S)

PET 5931 Special Topics in Exercise Physiology (1-3). Designed to present contemporary issues and practices in exercise physiology. Prerequisite: PET 3360. (AR)

PET 5936 Special Topics in Physical Education (1-3). Designed to present contemporary issues and practices in physical education and sport. (AR)

PET 6597 Survey of Research in Physical Education (3). Methods and techniques used in research in physical education. Emphasis on effective use of resources and writing techniques. (F)

PET 6775 Health Fitness Director (3). Designed to prepare the student for

ACSM's Health Fitness Director certification. Prerequisite: PET 3351, and PEP 5115. (SS)

PET 6785 Exercise Program Director (3). Designed to prepare the student for ACSM's Exercise Program Director certification examination. Prerequisite: PET 3351, PET 5387, and PEP 5115. (SS)

PET 6925-27 Practicum in Physical Education (1-3). Production and or application of materials and techniques for physical education in a classroom and or field setting. (F,S)

PET 6932 Seminar in Physical Education (3). Students will participate in the exploration, examination, and discussion of problems, issues, and trends in physical education and sport. (AR)

PET 6940 Internship in Exercise Physiology: Graduate (3-6). Clinical experience, supervised by physician, designed to provide the student with competence in exercise prescription and leadership in preventive and rehabilitative outpatient exercise programs. Prerequisites: PET 5387, PEP 5115, and PEP 5116. (F,S,SS)

PET 6944 Supervised Field Experience (3-9). Students may use this course to become involved in an in-depth study, research project, or any one of a variety of other activities, under the guidance of a faculty member. (AR)

RED 5155 Literacy Instruction in the Primary Grades (3). Provides understandings, skills and dispositions needed to teach reading and writing to students who are beginning to become literate. Required for students in VE Modified Masters Program. Prerequisites: EDG 5415 and EDG 5415L. Corequisite: EEX 4940.

RED 5447 Analysis and Production Reading Materials (3). Elective in graduate program in reading education. Exploration, creation, and evaluation of basic reading materials, commercial and non-commercial. Prerequisite: RED 4150 or equivalent. (AR)

RED 5448 Teaching Reading by Computer (3). Elective in graduate program in reading education. Evaluation and creation of computer programs for teaching reading in grades 4-12. No prior computer experience is required. (AR)

RED 5911 Directed Study in Reading (1-3). Elective in reading education. Directed study in area of reading instruction. Permission of instructor required. (AR)

RED 5925 Special Topics in Reading (3). Elective in master's program in reading education. Study in a specified area of reading education. (AR)

RED 6155 Instruction in Elementary Reading (3). Required in graduate program in elementary and reading education. Program development, methods of teaching, selection of materials, and review of research in elementary reading education. Prerequisite: RED 4150 or equivalent. (AR)

RED 6247 Organization and Supervision of Reading Program (3). Elective in graduate program in reading education. Philosophy, design, and operation of public and private reading programs. Prerequisite: RED 6155 or equivalent. (AR)

RED 6305 Instruction in Early Childhood Reading (3). Required in graduate program in early childhood education. Program development, methods of teaching, selection of materials, and review of research, in preschool and early childhood reading education. Prerequisite: RED 4150 or equivalent. (AR)

RED 6336 Reading in the Content Areas (3). Required in graduate program in reading education and in secondary Modified Master's Programs. Strategies for developing the reading abilities of students in specific subject areas. (AR)

RED 6515 Programs of Remediation in Reading (3). Required in graduate program in reading education. Knowledge and strategies necessary to improve students' reading abilities. Prerequisites: RED 6155 or 6305, RED 6546, or their equivalents. (AR)

RED 6546 Diagnosis of Reading Difficulty (3). Required in graduate program in reading education. Knowledge and strategies necessary to assess students' reading abilities. Prerequisite: RED 6155 or 6305, or its equivalent. (AR)

RED 6747 Research in Reading (3). Required in doctoral program and thesis track of Reading Education master's program. Elective in standard track. Includes reading re-

search, critique, methodology and planning. Prerequisite: EDF 5481. (AR)

RED 6805 Practicum in Reading (3). Elective in graduate program in reading education. Supervised experience as reading professional in teaching, assessing, supervising, or research role. Prerequisites: RED 6546, RED 6515. (F,S)

RED 6845 Clinical Procedures in Reading (3). Elective in graduate program in reading education. Reading diagnosis, instruction, and reevaluation in a clinical setting. Prerequisites: RED 6515, RED 6546. (AR)

RED 6931 Seminar in Reading Education (3). Required in doctoral program and thesis track of reading master's program. Elective in standard track. Deals with theory and practice of reading instruction. Prerequisites: Permission of instructor and RED 6747. (AR)

RED 6932 Critical Issues in Reading Education (3). Elective in Reading Education master's program. Explores topics in specific reading education. (AR)

RED 6971 Thesis in Reading Education (6). Required in thesis track of reading master's program. Design, implementation, and written report of an original research investigation in reading education. Prerequisites: Advanced graduate standing and consent of instructor. (F,S,SS)

RED 7912 Doctoral Directed Study in Reading (1-6). An elective course in the reading education doctoral program. Directed research in a specified area of reading education. Repeatable. Prerequisite: Admission to reading education doctoral program. (AR)

RED 7938 Doctoral Seminar in Reading Education (3). Required in Reading Education doctoral track. Advanced study in current theories and research related to reading education. Prerequisites: RED 6747, RED 6931. (AR)

SCE 5435 Secondary Science Laboratories: Methods & Materials (3). Increase the quantity and quality of laboratory experiences for secondary students by managing the laboratory safely, selecting appropriate activities, and evaluating student performance. (AR)

SCE 5905 Directed Study in Science Education (1-3). The student plans and carries out an independent

study project under direction. Prerequisite: Consent of instructor. (F,S,SS)

SCE 5930 Special Topics in Elementary Science Education (3). Available to undergraduate and graduate education majors. Provides knowledge and skills, content, strategies and materials for teaching elementary science. Permission of instructor required. (AR)

SCE 5945 Supervised Teaching: Science Education (6). Supervised teaching in a middle or senior high school. Prerequisites: Admission to the Modified Masters Track Program and completion of prerequisite coursework in education and subject matter area. (F,S)

SCE 6141 Science Education in Society (3). This course analyzes the impact of scientific, technological, and social advances upon curriculum and instruction in science education. (AR)

SCE 6245 Science Education for High Achieving Students (3). Program options, instructional designs and materials, and evaluation of gifted and other high achieving science students will be addressed. (AR)

SCE 6306 Instruction in Early Childhood Science (3). Elective in masters program in early childhood education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in pre-school, kindergarten and primary grades. Prerequisite: SCE 4310 or permission of instructor. (AR)

SCE 6315 Instruction in Elementary Science (3). Elective in masters program in elementary education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in elementary education. Prerequisite: SCE 4310 or permission of instructor. (AR)

SCE 6635 Teaching Science in the Secondary School (3). Analysis of methods, programs, and materials for teaching science in the junior and senior high school, and development of teaching skills. (F,SS)

SCE 6637 Science Education and Community Resources (3). This course examines the utilization and cultivation of community resources to meet science education goals for various populations. (AR)

SCE 6925-26 Workshop in Science Education (1-3). Production and application of materials and techniques in science education in a laboratory or field setting. (AR)

SCE 6931 Special Topics in Science Education (3). An individual topic or limited number of topics not otherwise offered in the curriculum that facilitate science teaching in the elementary school will be selected. (AR)

SCE 6933 Seminar in Science Education (3). Analysis of research trends and selected topics in science education. Mainly for graduate students in secondary science education. Individual needs and interests will determine the fine structure of the course content. (S)

SCE 7165 Curriculum Development in Science Education (3). Analysis of theoretical basis of curriculum development in Science Education Evaluation of currently available material. Development and testing of science curriculum materials. Prerequisites: SCE 6933, EDF 6486. (S)

SCE 7761 Research in Science Education (3). Application of research methodology to Science Education. Analysis of current research. Development of research proposal in Science Education. Conduct field study. Prerequisites: SCE 6933, EDF 6486, SCE 7165. Corequisite SCE 7938. (SS)

SCE 7938 Doctoral Seminar in Science Education (3). Advanced doctoral seminar in current theories and research related to science education. Prerequisites: SCE 6933, EDF 6486. (SS)

SDS 5460 Crisis Counseling and Intervention (3). Prevention and intervention strategies in crisis situations including child abuse and neglect, suicide, substance abuse, AIDS, and personal loss. (F)

SDS 6411 Counseling Children and Adolescents (3). Theory and application of counseling elementary age children and adolescents including family issues and interventions, legal and ethical considerations and counseling at-risk and exceptional children. Prerequisite: MHS 5400.

SDS 6700 Organization and Administration of School Counseling (3). Components, elements and interventions of comprehensive, developmental school guidance

program models. Emphasis on organization, administration, and evaluation of system, components, and services. (F,SS)

SDS 6784 School Law for Student Service Workers (3). Overview of current legal issues and problems for school counselors, psychologists and social workers. (SS)

SDS 6800 Advanced Practicum in Counseling (3). Advanced competencies in counseling and consultation. Prerequisites: Coursework completion. (F,S,SS)

SDS 6820 Supervised Field Experience in Counselor Education (6). Demonstration of the full range of competencies learned throughout the program in Counseling. Internship placements include a variety of field settings. (F,S)

SDS 6930 Special Topics in Counseling and School Psychology (3, repeatable to 9). Special topics in relation to counseling or school psychology. (F,S,SS)

SPS 6191 Psycho-Educational Assessment I: Intellectual (3). Competencies in the assessment of intellectual ability and adaptive behavior in children. Corequisite: SPS 6191L for School Psychology majors. No corequisite for other majors. (F)

SPS 6191L Psycho-Educational Assessment I: Lab (2). Practical skills in the assessment of intellectual ability and adaptive behavior in children. Corequisite: SPS 6191. (F)

SPS 6192 Psycho-Educational Assessment II: Process (3). Competencies in the assessment of psycho-educational processes in children and their relationship to intellectual ability. Corequisite SPS 6192L for School Psychology majors. No corequisite for other majors. Prerequisite: SPS 6191. (S)

SPS 6192L Psycho-Educational Assessment II: Lab (2). Practical skills in the assessment of psycho-educational processes in children. Emphasis on assessing disorders in the visual, auditory, haptic, language, and sensory integration areas. Corequisites SPS 6191, SPS 6191L. (S)

SPS 6193 Psycho-Educational Assessment III: Behavior (3). Competencies in behavioral and personality assessment of students within the school setting. Emphasis on projective testing and behavioral observa-

tions. Corequisite: SPS 6193L. Prerequisites: SPS 6191, SPS 6192. (SS)

SPS 6193L Psycho-Educational Assessment III: Lab (3). Practical skills in projective and behavioral assessment of students within the school setting. Corequisite: SPS 6193. Prerequisites: SPS 6191, SPS 6192. (SS)

SPS 6199 Family-School Consultation and Collaboration (3). Designed to develop an essential communicative/interactive interpersonal skills, as well as collaborative problem-solving skills, in special education, counseling, and school psychology graduate students. Corequisite: Graduate standing. (AR)

SPS 6678 Supervised Field Experience in School Psychology (1-10). Demonstration of the full range of competencies learned throughout the program in School Psychology. Internship placements include a variety of field settings. (F,S)

SPS 6805 Professional Problems in School Psychology (3). Competencies in regard to the development, role and function of school psychologists. General orientation and legal and ethical issues included. (F)

SSE 5908 Directed Study in Social Studies Education (1-3) (ARR). The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor. (F,S,SS)

SSE 5929 Workshop in Elementary Social Studies Education (3). Available to undergraduate and graduate education majors. Provides knowledge and skills, content, strategies and materials for teaching social studies. Permission of instructor required. (AR)

SSE 5945 Supervised Teaching: Social Studies Education (6). Supervised teaching in a middle or senior high school. Prerequisites: Admission to the Modified Masters Track Program and completion of prerequisite coursework in education and subject matter area. (S)

SSE 6305 Instruction in Early Childhood Social Studies (3). Elective in masters program in early childhood education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in pre-school, kindergarten and primary grades. (AR)

SSE 6355 Instruction in Elementary Social Studies (3). Elective in masters program in elementary education. Refines skills related to program development, methods of teaching, selection of materials, and review of research in elementary education. (AR)

SSE 6394 Social Studies in Other Nations (3). The course will examine the concept of social studies as a subject area in elementary and secondary schools found in both developed and developing nations. Comparisons and contrasts will be made. Prerequisites: SSE 6633, SSE 6939. (AR)

SSE 6633 Teaching Social Studies in the Secondary School (3). Analysis of methods, programs, and material for teaching social studies in the middle and senior high school, and development of teaching skills. (S,SS)

SSE 6795 Seminar: Research in Social Studies Education (3). The course will examine research in social studies education. The course will serve as a lab for developing a dissertation research design. Prerequisite: EDF 5481. Corequisites: EDF 6486, EDF 6403 or EDF 6475. (AR)

SSE 6924 Workshop in Content, Method, and Materials of Teaching Social Studies (1-3). Focus on content, methods, and materials needed for teaching social studies in the elementary school, K-6. (AR)

SSE 6925-28 Workshop in Social Studies Education (1-3). Production and application of materials and techniques in social studies education in a laboratory or field setting. (AR)

SSE 6939 Seminar in Social Studies Education (3). Designed for advanced students, the readings and discussions will focus on policy issues and recent research in social studies education. Though primarily for experienced social studies teachers and supervisors, the course is open to administrators and others, with the consent of the instructor. (S)

SSE 7938 Doctoral Seminar in Social Studies Education (3). Advanced doctoral study in current theories and research related to social studies education. Prerequisites: SSE 6939, EDF 6486. (AR)

TSL 5142 Curriculum Development in English as a Second Language (3). Description, analysis, planning, design, and evaluation of curriculum in

English as a second language (K-adult). (F,S)

TSL 5245 Developing ESOL Language and Literacy (3). This course examines how linguistic theories are applied in the classroom for the development of language and literacy in language minority students. (F,S)

TSL 5325 Teaching ESOL through Content-Areas (3). This course is designed for the content-area teacher of language minority students. The course promotes understanding of the academic, linguistic, and social needs of limited English students. (AR)

TSL 5371 Special Methods of TESOL (3). Investigation of modern techniques for the teaching of oral and written communication in English to non-native speakers of English, including the evaluation and development of materials for English to speakers of other languages. Issues in elementary, secondary, adult, vocational, and special education will also be addressed. (F,S)

TSL 5938 Principles of ESOL Testing (3). Advanced study and research on current issues in the field of ESOL testing. Topics include principles and practices of ESOL testing for classroom use, communicative language test development, criteria for evaluating testing instruments, and study of standardized ESOL tests. Prerequisites: TSL 5371 or TSL 4340. (S)

TSL 6350 Troublesome English: Grammar for ESOL Teachers (3). Course is designed to enhance ESOL teachers' ability to understand and explain the operation of American English grammar using an inductive approach of exploration and discovery. (AR)

TSL 6908 Field Component (3). Provides opportunity to carry out a variety of projects designed to develop critical reflection about teaching beliefs and practices in an ESOL classroom environment. Prerequisites: Admission to MS/TESOL program and completion of required coursework. (F,S)

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- Slater, Judith J., Ed.D.** (*University of Florida*), Associate Professor, Curriculum and Instruction, Educational Leadership and Policy Studies
- Smith, Douglas H., Ph.D.** (*Ohio State University*), Associate Professor, Adult Education and Human Resource Development, Educational Leadership and Policy Studies
- Soon, Yee P., Ph.D.** (*Florida State University*), Assistant Professor, Mathematics Education, Elementary Education
- Spears-Bunton, Linda, Ed.D.** (*University of Kentucky*), Assistant Professor, English Education, Subject Specializations
- Strichart, Stephen S., Ph.D.** (*Yeshiva University*), Professor, Special Education for Learning Disabilities, Educational Psychology and Special Education
- Toomer, Jethro, Ph.D.** (*Temple University*), Professor, Educational Psychology and Community Mental Health Counseling, Educational Psychology and Special Education
- Trigoboff, Debra, M.S. Ed.** (*Northwest Missouri State University*), Instructor, Sports Medicine
- Tucker, Jan L., Ph.D.** (*Indiana University*), Professor, Social Studies Education and Global Education, Subject Specializations
- Vos, Robert, Ed.D.** (*Rutgers University*), Associate Professor and Executive Associate Dean, Organizational Training, and Vocational Education, Subject Specializations
- Wagner, Michael J., Ph.D.** (*Florida State University*), Professor, Music Education, Subject Specializations
- Williams, Craig C., M.S.** (*Barry University*), Instructor, Elementary Education
- Wolff, Robert M., Ph.D.** (*Ohio State University*), Associate Professor, Parks and Recreation, and Sport Management, and Chairperson, Health, Physical Education and Recreation
- Woods, S. Lee, Ed.D.** (*Rutgers University*), Associate Dean, North Campus and Associate Professor, Educational Foundations and General Methodology, Educational Foundations and Professional Studies
- Yongue, Bill Ed.D.** (*West Virginia University*), Assistant Professor, Elementary Physical Education
- Zaragoza, Nina, Ph.D.** (*University of Miami*), Associate Professor, Language Arts, Elementary Education

College of Engineering and Design

College of Engineering and Design

Gordon R. Hopkins, *Dean*
 William G. McMinn, *Director*
 W. Kinzy Jones, *Associate Dean*
 Lourdes A. Meneses, *Assistant Dean*
 Gustavo A. Roig, *Associate Dean*
 James R. Story, *Associate Dean*
 Jully Dorr, *Development Officer*

The College of Engineering and Design is composed of two schools committed to the development of professionals who will serve the community in a wide variety of fields. In addition, there are two units in the College solely devoted to research and other creative activities.

Doctoral degrees in the School of Engineering can be earned in the field of Electrical Engineering and Mechanical Engineering.

Master's degrees can be earned in the following fields of study:

- Civil Engineering
- Computer Engineering
- Construction Management
- Electrical Engineering
- Engineering Management
- Environmental Engineering
- Industrial Engineering
- Mechanical Engineering

Master's degrees can be earned from the School of Design in the following fields of study:

- Architecture
- Environmental and Urban Systems
- Landscape Architecture

The programs of the College are directed towards the practical use of scientific, engineering and technical principles to meet the objectives of industry, business, government and the public.

The College provides each student with the opportunity to develop marketable skills and to obtain an education which will prepare him or her for a rewarding career and personal growth.

Underlying the programs of the College is a recognition that the growing impact of technology upon the quality of life is increasing and that the proper application of technology is critical to meeting current and emerging human needs.

The College faculty is actively engaged with business, industry and government. Faculty members are participating in a variety of applied research projects in such areas as energy, transportation, solid waste disposal, biomedical devices and in-

strumentation, water resources, computer engineering, artificial intelligence, manufacturing, robotics, telecommunications, micro-electronics, structural systems, biotechnology, education, etc.

School of Engineering

Doctor of Philosophy

The School offers Doctor of Philosophy degrees in Electrical and Mechanical Engineering. Areas of study in Electrical Engineering include: Biomedical Engineering, Micro-Electronics, Communications, Computer Engineering, Systems and Controls, Electromagnetics, Power Systems, Digital Signal and Image Processing. Areas of study in Mechanical Engineering include: Thermo/Fluid, Biomedical, Mechanics, Materials, CAD/CAM, and manufacturing.

Master of Science Degree Programs

The School offers Master of Science degrees in Civil Engineering, Computer Engineering, Electrical Engineering, Environmental Engineering, Industrial and Systems Engineering, and Mechanical Engineering. The various curricula for the School are designed to give the student an education for entry into the profession of engineering.

Prospective graduate students should refer to the appropriate section of the catalog, or contact the graduate advisor in either program.

Note: The programs, policies, requirements and regulations listed in the catalog are continually subject to review, in order to serve the needs of the University's various policies, and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice.

Florida International University and the College believe in equal opportunity practices which conform to all laws against discrimination and are committed to non-discrimination with respect to race, color, creed, age, handicap, sex, marital status, or national origin. Additionally, the University is committed to the principle of taking the positive steps necessary to achieve the equalization of educational and employment opportunities.

Florida Engineering Education Delivery System (FEEDS) provides graduate engineering education courses to place-bound professional located throughout the State via video tape and ITFS.

Accreditation

The Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET) accredits engineering programs on a nationwide basis. Students wishing more information about accreditation should consult their department office or the Office of the Dean. All baccalaureate engineering programs are EAC/ABET accredited.

Academic Support Services

The area of academic support services is responsible for the coordination of academic advising and student service activities for the college. This area is also responsible for keeping students informed on educational opportunities such as scholarships, tuition waivers, internships, co-op studies and campus resources. It also serves as a liaison between the academic departments and the student support services university wide and facilitates the registration process in order to make sure that the students adhere to the colleges guidelines.

A student who has been accepted to a degree program in the College must consult an advisor prior to the first class enrollment. An advisor may be assigned by contacting the Chairperson of the Department in which an academic major is desired. Continued contact (at least once per semester) with the advisor is urged to review progress and select courses for each succeeding semester. Such contact is required until an approved program of study is completed.

Prerequisites:

Courses taken without the required prerequisites and corequisites will be dropped automatically before the end of the term, resulting in a grade of "DR" or "DF".

Scientific Laboratory Fees: are now being assessed for certain courses where laboratory classes are part of the curriculum. Specific information on scientific laboratory fees may be obtained from the

academic departments or University Financial Services.

Academic Appeal Procedures

Academic Appeals not covered under the Academic Misconduct Policy shall be processed in the following manner:

Step 1. The student and faculty member will meet informally in an attempt to resolve the problem within 10 days of the alleged occurrence.

Step 2. If the informal meeting does not result in an acceptable remedy, the student can appeal in writing to the Department/Divisional Chairperson within ten days of the informal meeting. The written appeal should include the nature and conditions of the problem and a summary of the informal meeting with the faculty member involved.

Within ten days of the receipt of the written appeal, the Chairperson, student, and faculty member will meet in an attempt to resolve the problem.

Step 3. If the results from the meeting in Step 2 is not acceptable, the student can appeal in writing to the Dean of the College within ten days. The written appeal should include the nature and conditions of the problem and a summary of the meetings in Step 1 and in Step 2.

Within ten days of the receipt of the written appeal, the Dean will meet with the Chairperson, the student, and the faculty member in an attempt to resolve the problem.

The Dean will provide a written decision within ten days of the meeting in Step 3.

The Dean's decision is final.

Research and Development Centers

The Center for Advanced Technology and Education (NSF-CATE)

Malek Adjouadi, Associate Professor, Electrical and Computer Engineering Department, and Director

Noemi Fernandez, Lab Manager
Support Staff

Sonia Duranza
Patricio Vidal

Faculty

James Story
Gustavo Roig
Wunnava Subbarao

Researchers

Patricio Vidal
Elise Jakubzick
Carlos Reyes
John Riley
Nydia Ruiz

Christophe Godefroy
Annette Taberner
Mildred Saenz
Noemi Fernandez

NSF-Graduate-Fellows

Sonia Duranzas
Annette Taberner

The NSF-funded Center for Advanced Technology and Education - CATE provides a computing environment capable of engaging researchers as well as facilitating classroom and laboratory-based instruction in critical technology area such as image processing and computer vision, neural networks, distributed and parallel processing, visual programming and 3-D modeling. CATE constitutes an infrastructure that is viable for cutting-edge research activities providing an environment that facilitates state-of-the-art educational and research activities. The ONYX parallel machine, confocal microscope, flow cytometer, high-speed motion analyzer, roving robot, and several (24) SGI workstations provide the potential for: (a) parallel and distributed processing, (b) high performance 3-D rendering and modeling, (c) real-time processing capability, (d) operating systems and graphics that meet current standards, and (e) high-speed data acquisition, playback, analysis, and communications links.

Drinking Water Research Center

The Drinking Water Research Center conducts basic and applied studies in the area of water resources as it relates to drinking water quality and quantity. The Center also provides the opportunity for undergraduate and graduate students to conduct independent research in cooperation with other departments in the University. See the General Information section 'Centers and Institutes' for more details regarding the Center.

Staff

Hector R. Fuentes, Ph.D., P.E., D.E.E.,
(Vanderbilt University) Associate Professor

David P. Genereux, Ph.D.,
(Massachusetts Institute of Technology) Assistant Professor

Rudolf Jaffe, Ph.D., (Indiana University) Associate Professor

Shonali Laha, Ph.D., (Carnegie Mellon University) Assistant Professor

Laurie L. Richardson, Ph.D.,
(University of Oregon), Associate Professor

Vassilios A. Tsihrintzis, Ph.D., P.E., P.H., (University of Illinois at Urbana) Associate Professor

Future Aerospace Science and Technology Center for Cryoelectronics (FAST)

Grover Larkins, Associate Professor,
Electrical and Computer Engineering Department, and Director

FAST is one of five centers created by the Air Force as part of its minority university enhancement program, providing research experience opportunities for undergraduate and graduate students in the area of Electrical Engineering.

The FAST Center evaluates novel applications of space-based cryoelectronics, initially studying new systems for reduction in losses of feed and phase shift networks in phased array transmitter systems. This involves development of low-loss active integrated low-noise phased array or post-processed phased array down-converter receiving systems, high gain-low loss, low noise micro (and later millimeter) wave circuits and systems for space based applications. Of par-

ticular interest is the ability to design and fabricate integrated systems which could be used as "steerable" phased array antennas with, some frequency-agility as well.

Current research is focused on issues relating to: integration and hetero-epitaxy of the buffer and dielectric layer with the GaAs semiconductor and 123 high T_c superconductor layers; obtaining good ohmic GaAs contacts at low temperatures, tailoring the surface morphology of the high T_c superconductor to achieve a designed Q value for the passive elements, package design and testing with respect to microwave and thermal cycling consideration, and the identification and minimization of noise source.

Hemispheric Center for Environmental Technology HCET

M.A. Ebadian, *Professor, Mechanical Engineering Department, and Director*

Shara Schenck, *Assistant to the Director*

Z.F. Dong, *CMST-CP Program Manager, LDA & Numerical Modeling*

C.X. Lin, *Program Manager*

F. Mao, *Tanks Focus Area Program*

Joe Boudreaux, *D&D Program Manager*

Leo Lagos, *D&D Program Manager*
Richard Burton, *Industrial Liaison Program Manager*

Stan Solomon, *Analytical Lab Program Manager*

S.C. Madaris, *Sr. Environmental Scientist*

Amer Awwad, *Sr. Engineer*

Walter Conklin, *Senior Engineer*

Ivan Muguercia, *Tanks Focus Area Program*

Lilly Leda, *Technology Transfer Coordinator*

The Hemispheric Center for Environmental Technology was established by Florida International University and the United States Department of Energy's Office of Science and Technology (OST) to research, develop, and demonstrate innovative environmental technologies and to establish international alliances to facilitate the implementation of these technologies.

HCET's research and development (R&D) activities focus on the decontamination and decommissioning of nuclear facilities and the management and reduction of radioactive and hazardous wastes.

These R&D activities support the Department of Energy's Environmental Management programs in the areas of waste characterization, monitoring, and sensor technology; underground storage tank remediation; and decontamination and decommissioning.

HCET's mission is to develop and market technologies to solve environmental problems and foster sustainable development throughout the Americas. To achieve this end, HCET performs research and development, gathers and disseminates market and technology assessment data, facilitates technology transfer, and forms partnerships with industries and governments throughout the Americas. HCET targets its technology development for government organizations and industrial users of environmental technologies.

The foundation for HCET's technological capabilities has successfully been built within Florida International University's College of Engineering and Design. HCET has the capability and resources to develop innovative technologies as well as assess and demonstrate technologies that have been developed or modified both in-house and by other vendors. HCET also has the expertise to comparatively evaluate emerging technologies and pursue, organize, and facilitate technology transfer from suppliers to consumers.

Lehman Center for Transportation Research (LCTR)

The Lehman Center for Transportation Research (LCTR) at Florida International University was established in 1993 in honor of Congressman Bill Lehman and his tireless efforts to make South Florida a better place for all of us. The center's vision is to become a strong 'state-of-the-art' transportation research and training facility. LCTR is committed to serve and benefit our society by conducting research to improve mobility, hence the quality of life issues, develop partnerships in the transportation industry, and educate a multidisciplinary workforce to plan, manage and implement transportation systems.

Faculty, staff and students at LCTR are involved in research related to the design and operation of transportation systems, public policy, air pollution, and the application of geographic information systems and other advanced technologies such as artificial neural networks and scientific visualization in transportation. Future plans include networking with the public and private industry to collaborate on transportation related research. In addition, applied research will be conducted on, but not limited to intelligent vehicle and highway systems.

Manufacturing Research Center (MRC)

Chin-Sheng Chen, *Professor, Industrial Engineering Department, and Director*

The Manufacturing Research Center (MRC) is being developed with a grant from the Advanced Research Projects Administration and is a fully integrated manufacturing system from concept, through prototyping, to finished hardware or manufactured tool and die assemblies. With the rapid movement of industry to reduce time to market from product concept, the Center has been designed to support local industry in the South Florida region and provide an environment for advance manufacturing research. The Center contains a design and rapid prototyping front end, integrated into a CNC machining facility through to a back end injection molding machine with injection mold fabrication and part fabrication, both in plastic and metal by spin casting. The Center contains: three rapid prototyping systems, a turning machining center, a vertical machining center, a coordinate measuring machine, and injection molding equipment, supporting CAD/CAM and cell control software.

Concurrent Engineering: Under the support of ARPA, the MRC has developed an integrated product/process concurrent engineering system. It is a feature-based engineering system for concurrent product and process design, and focuses on the development of unified product information model, an innovative product modeling technique, a manufacturing resources database and various engineering applications to demonstrate the

feasibility of the concurrent engineering concept.

Production Planning & Scheduling: Funded by the Defense Logistic Agency, this project is to improve the practice of apparel production planning, scheduling, and control, with its focus on development and implementation of a practical computer integrated system for the apparel manufacturing industry. The system will accurately estimate time-phased plant capacity, generate production plans, prepare resource requirements, assign workers to workstations, respond to order inquiries and change, and control shop floor activities. It will be built upon an open system architecture with a set of production engineering tools for master production planning, capacity planning, learning and skill prediction, material requirements planning, plant loading, worker assignment, and shop floor monitoring and control.

Intelligent Cell Engineering and Control: The purpose of this research (funded by NSF) is to design and develop a neural network based decision support system for use in design and configuration of advanced manufacturing cells and cell control system. This project also explores an intelligent shop floor framework for on-line scheduling and control of flexible manufacturing systems.

Knowledge-Based Data Screening & Analysis for Shuttle Operations: Sponsored by NASA, this project is to design and develop a knowledge-based tool for the shop floor modeling, analysis and reporting.

Southern Technology Application Center STAC

Irma B. Fernandez, Director

The Southern Technology Application Center (STAC) serves nine southeastern states and is part of a national network of technology transfer resources and expertise. STAC's mission is to help increase U.S. competitiveness and spur economic development in the south-east through the transfer of critical knowledge. One of the programs STAC operates in the Southeast Regional Technology Transfer Center to help companies acquire and commercialize technology developed by NASA and other federal laboratories. It provides assistance in every phase of technology development and commercialization. STAC's assistance spans from identi-

fying and locating technologies, to analyzing markets, to bringing together experts from government, academic and industry to address complex technical questions. STAC is supported by the State of Florida University System and NASA's Office of Space Access and Technology, Commercial Technology Division.

External Programs

Dr. Irma Becerra-Fernandez,
Director

Mercy Rueda, FEEDS Coordinator

Florida Engineering Education Delivery System (FEEDS) is a statewide system whereby graduate and undergraduate level engineering courses are delivered to industrial sites and cooperating centers via distance learning. Students with work and family responsibilities are offered the flexibility to take courses around their busy schedules. Courses are delivered through one of the following three methods: videotape (asynchronous, traditional FEEDS program); ITFS (synchronous, interactive TV that is one-way video and two-way audio); and videoconferencing (synchronous, interactive TV that is two-way video and two-way audio).

Currently, students can select the necessary courses from FIU via distance learning to obtain a Master's degree in Electrical Engineering, Computer Engineering, Industrial Engineering, Manufacturing Engineering, Construction Management and Engineering Management.

A student taking a course through FEEDS must meet the same requirements as the student on campus and will earn the same credit as if he/she were to attend classes on campus. A student need not be enrolled in a graduate or undergraduate degree program in order to take a course. However, a student who intends to seek admission to a program should be aware that no more than six (6) graduate or fifteen (15) undergraduate credits are allowed to be transferred into a program.

School of Engineering

Doctor of Philosophy

The School offers Doctor of Philosophy degrees in Electrical and Mechanical Engineering. Areas of study in Electrical Engineering include: Biomedical Engineering, Micro-Electronics, Communications, Computer Engineering, Systems and Controls, Electromagnetics, Power Systems, Digital Signal and Image Processing. Areas of study in Mechanical Engineering include: Thermo/Fluid, Biomedical, Mechanics, Materials, CAD/CAM, and manufacturing.

Master of Science Degree Programs

The School offers Master's of Science degrees in Civil Engineering, Computer Engineering, Electrical Engineering, Environmental Engineering, Industrial and Systems Engineering, and Mechanical Engineering. The various curricula for the School are designed to give the student an education for entry into the profession of engineering.

Prospective graduate students should refer to the appropriate section of the catalog, or contact the graduate advisor in either program.

Note: The programs, policies, requirements and regulations listed in the catalog are continually subject to review, in order to serve the needs of the University's various policies, and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice.

Florida International University and the College believe in equal opportunity practices which conform to all laws against discrimination and are committed to non-discrimination with respect to race, color, creed, age, handicap, sex, marital status, or national origin. Additionally, the University is committed to the principle of taking the positive steps necessary to achieve the equalization of educational and employment opportunities.

Florida Engineering Education Delivery System (FEEDS) provides graduate engineering education courses to place-bound professional located throughout the State via video tape and ITFS.

Accreditation

The Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET) accredits engineering programs on a nationwide basis. Students wishing more information about accreditation should consult their department office or the Office of the Dean. All baccalaureate engineering programs are EAC/ABET accredited.

Academic Support Services

The area of academic support services is responsible for the coordination of academic advising and student service activities for the college. This area is also responsible for keeping students informed on educational opportunities such as scholarships, tuition waivers, internships, co-op studies and campus resources; serves as a liaison between the academic departments and the student support services university wide; and facilitates the registration process in order to make sure that the students adhere to the colleges guidelines.

A student who has been accepted to a degree program in the College must consult an advisor prior to the first class enrollment. An advisor may be assigned by contacting the Chairperson of the Department in which an academic major is desired. Continued contact (at least once per semester) with the advisor is urged to review progress and select courses for each succeeding semester. Such contact is required until an approved program of study is completed.

Prerequisites:

Courses taken without the required prerequisites and corequisites will be dropped automatically before the end of the term, resulting in a grade of "DR" or "DF".

Scientific Laboratory Fees: are now being assessed for certain courses where laboratory classes are part of the curriculum. Specific information on scientific laboratory fees may be obtained from the academic departments or University Financial Services.

Academic Appeal Procedures

Academic Appeals not covered under the Academic Misconduct Policy shall be processed in the following manner:

Step 1. The student and faculty member will meet informally in an attempt to resolve the problem within 45 days of the alleged occurrence.

Step 2. If the informal meeting does not result in an acceptable remedy, the student can appeal in writing to the Department/Divisional Chairperson within *ten days* of the informal meeting. The written appeal should include the nature and conditions of the problem and a summary of the informal meeting with the faculty member involved.

Within ten days of the receipt of the written appeal, the Chairperson, student, and faculty member will meet in an attempt to resolve the problem.

Step 3. If the results from the meeting in Step 2 is not acceptable, the student can appeal in writing to the Dean of the College within ten days. The written appeal should include the nature and conditions of the problem and a summary of the meetings in Step 1 and in Step 2.

Within ten days of the receipt of the written appeal, the Dean will meet with the Chairperson, the student, and the faculty member in an attempt to resolve the problem.

The Dean will provide a written decision within ten days of the meeting in Step 3.

The Dean's decision is final.

Civil and Environmental Engineering

L. David Shen, P.E. *Professor and Chairperson*
Nii O. Altah-Okine, *Assistant Professor*
Hector R. Fuentes, P.E. *Associate Professor, Environmental Program Coordinator*
Wenxuan Cui, *Research Associate*
Sylvan C. Jolibois, Jr., *Assistant Professor*
Shonali Laha, P.E. *Assistant Professor*
Young-Kyun Lee, *Assistant Professor*
Chunhua Liu, *Research Associate*
Beth Pascual, E.I. *Instructor/Undergraduate Advisor*
Luis A. Prieto-Portar, P.E. *Professor*
Wolfgang F. Rogge, *Assistant Professor*
Lambert Tall, P.E. *Professor*
Walter Z. Tang, P.E. *Assistant Professor*
Berlin Tansel, P.E. *Associate Professor*
LeRoy E. Thompson, P.E. *Professor*
Vassilios A. Tsihrintzis, P.E. *Associate Professor*
Oklay Ural, P.E. *Professor*
Ton-Lo Wang, P.E. *Professor*
Fang Zhao, P.E. *Assistant Professor*

Lehman Center for Transportation Research

L. David Shen, *Director*
Vivian Donis, *Coordinator*
Diana I. Ospina, *Research Associate*
Hesham Elbadrawi, *Research Associate*

The Department of Civil and Environmental Engineering offers advanced study for the degree of Master of Science. The areas of specialty are Structures, Mechanics, Geotechnical, Construction, Transportation, Water Resources, and Environmental Engineering. The degree will be a Master of Science in Civil Engineering or a Master of Science in Environmental Engineering depending upon the area of selected graduate study.

Master of Science In Civil Engineering

Fang Zhao, *Coordinator, Civil Engineering Graduate*

The Master of Science program in Civil Engineering emphasizes course work as well as research. The student is generally encouraged to specialize in a defined area of civil engineering, but may also find it desirable to pursue a more general pro-

gram of studies combining subject material from different areas of specialization and interdisciplinary related courses.

The graduate degree is offered to prepare qualified students for the professional practice of civil engineering. The degree is available in a thesis or non-thesis program. The thesis program entails a minimum of six credits for the successful completion of the research and thesis. The non-thesis program must be supported by the successful completion of a project and a report of substantial engineering content for a minimum of three credits. A student must satisfactorily complete a minimum of 30 semester credits of acceptable graduate coursework which includes a minimum of 12 credits of graduate courses in the specialty area.

Master of Science in Environmental Engineering

Walter Z. Tang, *Coordinator, Environmental Engineering Graduate*

A Master of Science in Environmental Engineering is available to persons interested in graduate work in Environmental Engineering. The program is designed to give graduate students a broad base of knowledge on environmental engineering and on problem solving while encouraging them to pursue individual research interests. Thus, the curriculum has a common core of courses but is flexible enough to permit an interdisciplinary approach, if so desired, and allows the student to pursue his or her career goals.

A proposed program of studies will be developed by the advisory committee together with the student. The applicant should hold a Bachelor's degree in engineering, the natural sciences, or a related field. Students who do not meet the stated criteria as developed by the faculty may be considered for admission if they complete the required prerequisites and satisfy any deficiencies. A student must satisfactorily complete a minimum of 30 semester credits of acceptable graduate courses and either a master thesis or an engineering project.

Master of Science in Environmental and Urban Systems

Admission Requirements

The School of Design coordinates an inter-disciplinary graduate program leading to a Master of Science degree in Environmental and Urban Systems (MEUS). The purpose of the MEUS degree is to provide a multi-disciplinary education to men and women interested in the practice of urban and environmental planning. Graduates of the program may eventually apply their skills in various government agencies or private enterprises within a variety of subject areas. Particular emphasis may be placed on issues related to tropical and subtropical areas.

Program

The Master of Environmental and Urban Systems (MEUS) is an interdisciplinary program designed for planning professionals and graduate students in urban issues. The degree requires completion of 36 graduate semester credits, including a six credit-hour master's thesis. A student's program of study must be approved by the program coordinator.

Courses and Concentrations

All MEUS courses address cutting edge issues; all emphasize innovative problem solving. Among the courses offered are Sustainable Community Development, Planning Law and Ethics, Land Use and Land Planning, Pedestrian and Transit Friendly Design, and Geographic Information Systems for Planners.

Each MEUS graduate will have developed specialized expertise in some area of planning, through his or her course work and master's thesis. Based on the university's strategic themes, five concentrations have been created for MEUS students, complete with lists of recommended courses from other departments. The five concentrations are: Environmental Planning, International Planning and Development, Transportation Planning, Urban Design, and Urban Sociology.

The emphasis is on flexibility. The student who wishes to design a concentration around his or her professional interests is encouraged to do so.

Steering Committee

The MEUS Steering Committee consists of representatives from the De-

partments of Civil and Environmental Engineering, Environmental Studies, International Relations, Landscape Architecture, Public Administration, and Sociology and Anthropology, plus the FIU/FAU Joint Center for Environmental and Urban Problems. The Steering Committee participates in the award of graduate assistantships, the design of new courses, the choice of adjunct faculty—indeed, in all significant program decisions.

Course Times and Locations

To accommodate working professionals, all MEUS courses are scheduled for the late afternoon or early evening hours. Intensive Saturday courses, compressed to six weeks, will soon be offered as well. Courses are rotated among the main campus, north campus, and downtown Government Center, based on demand.

Employment Opportunities

Employment opportunities are available in externally funded research projects, and the MEUS program itself awards up to four graduate assistantships each semester. With the assistantships come partial fee waivers.

The MEUS graduate assistantships involve part-time work on sponsored research projects at FIU, some of statewide and national significance. Students may be assigned, in certain cases, to FIU research centers such as the Joint Center for Environmental and Urban Problems, the Lehman Transportation Center, or the Latin American and Caribbean Center. The Joint Center for Environmental and Urban Problems at FIU has an exchange program with the South African Institute of Town and Regional Planners; MEUS students are given priority in placements.

Admission Policies for all Graduate Programs

A student seeking admission into the graduate program must have a bachelor's degree in Civil Engineering, Environmental Engineering, other related engineering or equivalent from an accredited institution or, in the case of foreign students, an institution recognized in its own country as preparing students for further study at the graduate level. All graduate applicants, regardless of previous grade point average or degrees, are required to submit their GRE (general) scores. An applicant must present either:

1. A "B" average in upper level undergraduate work, or
2. A combined score of 1000 or higher on the verbal and quantitative sections of the Graduate Record Examination (GRE), or
3. A graduate degree from an accredited institution and
4. If applicable, a TOEFL score of 500 or higher.

Students who meet all criteria, except for requirements 1, 2, and 3 above, may be evaluated for admission under the BOR 10% Policy Waiver.

Grades earned at an institution with non-traditional grading systems will be given every consideration and applicants will be treated equally with students from institutions with traditional grading systems.

Foreign students are admitted as governed by University Admission rules and Board of Regents Rule 6C-6.09:

1. Eligible students may be accepted at the appropriate level subject to space and fiscal limitations.
2. In addition to University admission requirements, foreign students must meet the following requirements as a minimum:
 - a. The applicant shall be academically eligible for further study in his or her own country.
 - b. The applicant whose native language is other than English shall demonstrate proficiency in the English language by presenting a score of 500 or higher on the Test of English as a Foreign Language (TOEFL).

Application Procedures for all Graduate Programs

A student planning to enroll in the graduate program must complete the following:

1. Submit a Graduate Application for Admission to the Admissions Office. Application forms will be mailed upon request.
2. Have a copy of the official transcripts of all previously earned college or university credits sent from the applicant's former institution(s) to the Admission Office.
3. Submit scores on the Graduate Record Examination (GRE).
4. Foreign students must submit TOEFL scores (500 minimum score).
5. It should be emphasized that the admission cannot be acted

upon until all of the documents and credentials have been received.

6. Students applying under the BOR 10% waiver must contact the departmental main office for filing instructions and deadlines.

Degree Requirements

To be eligible for a Master's degree a student must:

1. Satisfy all University requirements for a Master's degree.
2. Meet all undergraduate deficiencies, and requirements as specified by the students' advisory committee.
3. Complete 30 semester hours of acceptable graduate level courses.
4. Earn a minimum average of 3.0 in all approved courses in the student's program of study.
5. Complete an acceptable thesis or engineering project.
6. Pass an oral examination that includes an oral defense of the thesis or engineering project.
7. Master's degree students in Environmental Engineering must, in addition register for one credit of the Graduate Environmental Seminar (ENV 6935) and are encouraged to participate in it each year.

Grades and Credits

No course in which a grade below a 'C' is earned may be counted toward the Master of Science in Civil Engineering or in Environmental Engineering.

Transfer Credit

The student may receive permission to transfer up to a maximum of six semester hours of graduate credit provided that: (1) the course(s) were taken at the graduate level at an accredited college or university; (2) grade(s) of 'B' or higher; (3) the course(s) are judged relevant by the student's advisory committee; (4) the credits were not used toward another degree; and (5) the credit(s) were completed within seven years immediately preceding the awarding of the degree.

Credit is not transferable until the student has earned 12 semester hours in the Civil Engineering or Environmental Engineering programs.

Time Limit

All work applicable to the Master's degree, including transfer credit, must be completed within seven years immediately preceding the awarding of the degree.

Course Descriptions

Definition of Prefixes

CES-Civil Engineering Structures;
CEG-Engineering General, Civil;
CGN-Civil Engineering; CWR-Civil
Water Resources; EES-Environmental
Engineering Science; EGM-Engineer-
ing, Mechanics; EGN-Engineering,
General; ENV-Engineering, Environ-
mental; TTE-Transportation and Traf-
fic Engineering

CCE 5035 Construction Engineering Management (3). Course will cover construction organization, planning and implementation; impact and feasibility studies; contractual subjects; liability and performance; the responsibility of owner, contractor and engineer. Prerequisite: CCE 4001.

CCE 5505 Computer Integrated Construction Engineering (3). Course covers the discussion of available software related to Construction Engineering topics; knowledge based expert systems and their relevance to construction engineering planning and management. Prerequisite: CCE 4001.

CEG 5065C Geotechnical Dynamics (4). Analytical, field, and laboratory techniques related to vibration problems of foundations, wave propagations, behavior of soils and rocks, earth dams, shallow and deep foundations. Earthquake engineering. Prerequisite: CEG 4011.

CEG 6017 Theoretical Geotechnical Mechanics (3). A continuum mechanics interpretation of geotechnical engineering: soil rheology; theories of yielding; failure and plastic stability. Analytical and numerical modeling of non-linear properties. Prerequisites: CEG 4012C and MAP 2302. Suggested corequisite: MAP 4401.

CEG 6105 Advanced Foundations Engineering (3). Computer applications involving the numerical analysis and design of complex soil-structure interactions: highway and airfield pavements, deep foundation groups and NATM tunnelling techniques. Prerequisite: CEG 4012.

CES 5106 Advanced Structural Analysis (3). Extension of the fundamental topics of structural analysis with emphasis on energy methods and methods best suited for non-prismatic members. Prerequisite: CES 4101.

CES 5325 Design of Highway Bridges (3). Structural analysis and design for

highway bridge systems which includes design criteria, standards of practice and AASHTO specifications for designing superstructures and substructure elements of various types of bridges. Prerequisites: CES 4605, CES 4702, CEG 4011.

CES 5565 Computer Applications in Structures (3). Discussion and application of available computer programs, techniques and equipment for the analysis, design and drafting of structures. Graduate students have to do a project. Prerequisites: CES 4605 and CES 4702.

CES 5606 Advanced Structural Steel Design (3). Extension of the analysis and design of structural elements and connections for buildings, bridges, and specialized structures utilizing structural steel. Prerequisites: CES 4101, CES 4605.

CES 5715 Prestressed Concrete Design (3). The behavior of steel and concrete under sustained load. Analysis and design of pre-tensioned and post-tensioned reinforced concrete members, and designing these members into the integral structure. Prerequisite: CES 4702.

CES 5800 Timber Design (3). The analysis and design of modern wood structures. Effect of plant origin and physical structure of wood on its mechanical strength; fasteners and their significance in design. Prerequisite: CES 4101.

CES 6706 Advanced Reinforced Concrete Design (3). The analysis and design of reinforced concrete and masonry structural systems to formalize the student's knowledge of the behavior of structural components into a final integrated structure. Prerequisites: CES 4101, CES 4702, CEG 4011.

CGN 5320 GIS Applications In Civil and Environmental Engineering (3). Introduction to the basics of geographic information systems, their software and hardware, and their applications in Civil and Environmental Engineering, landscape architecture, and other related fields. Prerequisites: CGS 3420, SUR 3101C and consent of instructor.

CGN 5905 Directed Independent Study (1-3). Individual conferences, assigned readings, and reports independent investigations selected by the student and professor with approval of advisor.

CGN 5930 Advanced Special Topics in Civil Engineering (1-3). A course designed to give groups of students an opportunity to pursue special studies in an advanced topic of Civil Engineering not otherwise offered. Prerequisite: Permission of instructor.

CGN 5935 Professional Engineering (Civil) Review (4). Prepares qualified candidates to take the P.E. written examination in the field of Civil Engineering. Reviews hydraulics, hydrology, water supply and wastewater, geotechnics, structures, concrete and steel design, etc.

CGN 6916 Engineering Project (1-3). Independent research work culminating in a professional practice oriented report for the requirements of the non-thesis option of the M.S. degree. Prerequisites: Fifteen graduate credits and approved project plan.

CGN 6939 Graduate Seminar (1-3). An examination of recent technical findings in selected areas of concern. Emphasis is placed on presentations (oral and written), research activities, readings, and active discussions among participants. Prerequisite: Permission of graduate's advisor.

CGN 6971 Thesis (1-6). The student following the thesis option of the Master's degree will pursue research through this course. The research work will culminate with an acceptable thesis. Prerequisite: Permission of graduate's thesis advisor.

CWR 5235 Open Channel Hydraulics (3). Theoretical treatment and application of hydraulics. Flow in open channels with special reference to varied flow, critical state hydraulic jump, and wave formation. Prerequisites: CWR 3101.

CWR 5251 Environmental Hydraulics (3). Application of fluid mechanics in the study of physical mixing in surface water bodies, dispersion of materials, and design of hydraulic systems. Prerequisite: Permission of instructor.

CWR 6117 Statistical Hydrology (3). Quantitative determination of surface water run-off from a statistical approach. Prerequisites: CWR 3201 and CWR 3103.

CWR 6125 Groundwater Hydrology (3). Physical properties, equations of flow/mass transport, saturated/unsaturated zone, wells, pumping tests, quality/contamination control, analytical solutions, introduction to

numerical models/computer codes.
Prerequisite: Permission of instructor.

CWR 6126 Advanced Groundwater Hydrology (3). Finite difference/finite element/boundary integral methods, transport and fate of chemically and biologically reacting solutes, tracer tests, hydrological approaches to remedial action and monitoring. Prerequisites: CWR 6125, or permission of instructor.

CWR 6236 Engineering Sediment Transport (3). Physical processes of sediment transport and deposition, land erosion, river morphology applied to engineering design, design of stable channels, scour, transport of sediment-attached pollutants.

EES 5135 Water Quality Indicators (3). Ecological studies of micro and macro organisms which are indicators of water quality. Emphasis of bioassays and early warning systems. Prerequisite: Permission of instructor.

EES 5137 Biological Monitoring of Freshwater Ecosystems (3). The use of aquatic insects and other invertebrates to monitor changes in the aquatic environment. The ecological aspects of aquatic insects in relation to pollution stress are assessed. Prerequisite: EES 5135 or permission of instructor.

EES 5506 Occupational Health (3). Effects, assessments, and control of physical and chemical factors in man's environment, including chemical agents, electromagnetic radiation, temperature, humidity, pressures, illumination, noise, and vibration. Prerequisite: Admission to graduate program.

EES 5605 Noise Control Engineering (3). Fundamentals of sound and noise. Health hazards and other effects. Measurement and noise control in transportation, construction, and other environments. Prerequisite: Admission to graduate program.

EES 6506 Environmental and Human Factors (3). Effects, assessment and control of physical and chemical factors in the natural and man-made environments, including noise, electro-magnetic radiation, air and water pollution, public and occupational health, vector control, communicable diseases. Prerequisite: Admission to graduate program.

EES 6508 Occupational Health and Toxicology (3). A continuation of EES 6506. Investigation of toxic sub-

stances in air, water, and food in the industrial environment. Prerequisite: EES 6506.

EGM 5111 Experimental Stress Analysis (3). Course covers the necessary theory and techniques of experimental stress analysis and the primary methods employed: brittle coating, strain gauges, photoelasticity and Moiré. Prerequisites: EGM 3520, EGM 5653.

EGM 5351 Finite Element Methods in Mechanics (3). Matrix techniques and variational methods in solid mechanics; single element, assemblage and generalized theory; non-linear analysis; applications in structural and soil mechanics, torsion, heat conduction and hydroelasticity, etc. Prerequisite: EGM 3520.

EGM 5421 Structural Dynamics (3). Fundamentals of free, forced, and transient vibration of singles and multi-degree of freedom structures, including damping of lumped and distributed parameters systems. Graduate students have to do a project. Prerequisite: MAP 3302.

EGM 5533 Advanced Mechanics of Materials (3). Extension of the fundamental principles of engineering mechanics to include curved beams, warping, stability, etc. Prerequisites: CES 4101, MAP 3302.

EGM 5653 Theory of Elasticity (3). An advanced course covering the concepts of stress and strain tensors, indicia notation, transformation of stresses, compatibility equations, the stress function and the closed form solution of some important continuum mechanics problems. Prerequisites: EGM 3520, MAP 3302.

EGM 6675 Advanced Plasticity (3). Formulation of the plastic stress-strain relationships; Prandtl-Reuss equations; yield criteria; Plane Plastic Flow and the Plane Slip Line Field Theory; limit analysis and basics of creep. Prerequisite: EGM 3520.

EGM 6736 Theory of Elastic Stability (3). Course will cover the beam-column problem; elastic and inelastic buckling of bars and frames; review of experimental work and design formulas; buckling of rings, curved bars and arches; bending and buckling of thin plates and thin shells. Prerequisites: EGM 3520.

EGM 6796 Theory of Plates and Shells (3). A course covering the concepts of thin plates with small deflections; thin plates with large de-

flections; thick plates; the Membrane theory of Shells; and the General Theory of Cylindrical Shells. Prerequisites: EGM 3520.

EGN 5455 Numerical Methods in Engineering (3). Study of procedures that permit rapid approximate solutions, within limits of desired accuracy, to complex structural analysis. Graduate students have to do a project. Prerequisite: CES 4101.

EGN 5990 Fundamentals of Engineering (FE) Review (4). Prepares upper level engineering students to take the Fundamentals of Engineering (FE) State Board examinations. Reviews chemistry, computers, statistics, dynamics, electrical circuits, fluid mechanics, mechanics of materials, material science and thermodynamics.

ENV 5002C Fundamentals for Environmental Engineers (3). Laws and principles of the physical, chemical and biological phenomena that define and control the fate of chemical species in natural and engineered systems. Prerequisite: Permission of instructor.

ENV 5007 Environmental Planning (3). Environmental laws and regulations, ecological principles, planning policies and processes, risk assessment, environmental impact due to growth, and environmental indicators.

ENV 5008 Appropriate Technology for Developing Countries (3). Appropriate environmental technologies and associated factors. Topics include water, air, soil and waste management. Low cost and energy alternatives are emphasized. Prerequisite: Permission of instructor.

ENV 5062 Environmental Health (3). Study of the control and prevention of environmental-related diseases, both communicable and non-communicable, injuries, and other interactions of humans with the environment. Prerequisite: Permission of the instructor.

ENV 5065 Vector and Pest Control (3). Effects and management of public health vectors and communicable diseases. Prerequisite: ENV 5500 or permission of instructor.

ENV 5105 Air Quality Management (3). The air pollution problem, principal types, sources and dispersion of pollutants. Physical, economic, and legal aspects of control of atmospheric pollutants.

ENV 5116 Air Sampling Analysis (3). Practical laboratory work and theoretical aspects involved in a wide range of air sampling and analysis systems. Critical comparison and examination of methods and instrumentation. Source testing, instrumental sensitivity, applicability and remote sensing systems. Prerequisite: ENV 5105 or ENV 4101.

ENV 5126 Air Pollution Control (3). Air pollution control-devices, principles, efficiencies, costs. Gas scrubbers, electrostatic precipitation, thermal deposition, filters, condensers, afterburners. By-product recovery. Stoichiometry of combustion mixtures and basic industrial plant designs are discussed. Prerequisite: ENV 4101 or ENV 5105.

ENV 5334 Spill Response and Hazardous Materials Transport (3). Consequence analysis of accident scenarios covering the release and dispersion of toxic substances during transport into air, soil, or aquifer and fast response to spills and toxics recovery. Prerequisite: Permission of instructor.

ENV 5335 Advanced Hazardous Waste Treatment Processes (3). Theory and principles of technologies for treatment and disposal of hazardous waste. Procedures for remedial investigations and feasibility studies. Prerequisite: Hazardous Waste Assessment and Remediation or permission of the instructor.

ENV 5356 Solid Wastes (3). In-depth study of the solid waste problem. Topics include municipal, industrial, and agricultural generation of wastes; municipal collection systems; methods of disposal, hazardous wastes, and energetic considerations in the recovery and recycle of wastes.

ENV 5512 Water and Wastewater Analysis (3) Relevance of the main quality parameters and their measurements by wet chemistry and analytical equipment. Includes BOD, COD, TOC, CO, TSS, VSS, alkalinity, acidity, PH hardness, ammonia, TKN, NO₂, NO₃, PO₄, etc. Prerequisites: ENV 5666, CHM 1046, and CHM 1046L. Corequisite: ENV 5512L.

ENV 5512L Water and Wastewater Analysis Laboratory (1). Experiments are conducted which measure gross organic pollution indicators, suspended solids, conductivity, alkalinity, acidity, pH, nitrate, nitrite, TKN, ammonia, total phosphates, chlorine residual and chlorine break-

point. Prerequisites: ENV 5666, CHM 1046, and CHM 1046L. Corequisite: ENV 5512.

ENV 5517 Water and Wastewater Treatment (3). Wastewater collection systems. Integration of unit operations into the planning and design of treatment plants, including sludge handling and disposal. Prerequisite: Permission of instructor.

ENV 5659 Regional Planning Engineering (3). Theories of urban and regional growth; collective utility analysis; input-output models in planning; application of linear programming to regional social accounting; economic base analysis. Prerequisite: Computer Programming or permission of instructor.

ENV 5666 Water Quality Management (3). Predicting and evaluating the effect of human activities on streams, lakes, estuaries, and ground waters; and the relation of human activities to water quality and protection of water resources. Prerequisite: Permission of instructor.

ENV 5905 Independent Study (1-3). Individual research studies available to academically qualified students on graduate status.

ENV 5930 Special Topics in Environmental Engineering (1-3). Specific aspects of environmental technology and urban systems not available through formal course study. A maximum of three credits are applicable towards degree. Open to academically qualified students only.

ENV 6045 Environmental Modeling (3). Evaluation of regional resources, environmental stresses, and considerations in regional systems; systems analysis in environmental management and its relation to decision making; modeling of air and water systems. Prerequisite: Computer programming or permission of the instructor.

ENV 6070C Pollution Prevention (3). Pollution prevention guidelines. Characterization, assessments and audits of processes in the energy and industrial sectors. Minimization approaches. Feasibility, cost analysis and implementation. Prerequisite: Permission of instructor.

ENV 6510 Advanced Unit Operations I (3). Theory and design of physical and chemical processes for treatment of contaminated media. Application of fluid mechanics, heat and mass transfer to design and opera-

tion of physical/chemical systems. Prerequisite: Permission of instructor.

ENV 6511C Advanced Unit Operations II (3). Theory and design of biological processes for treatment of contaminated media. Application of biochemical reaction kinetics theory to design and operation of biological treatment systems. Prerequisite: Permission of instructor.

ENV 6511L Advanced Unit Operations II Lab (1). Bench scale experiments for scaling-up and designing the following water and wastewater processes: sedimentation, coagulation, filtration, adsorption, oxidation and gas transfer. Prerequisite: ENV 6510. Corequisite: ENV 6511.

ENV 6516 Advanced Treatment Systems (3). Integration of unit operations into advanced treatment systems for contaminated media. Applications may include either conventional or innovative/emerging technologies. Prerequisite: ENV 5002C.

ENV 6558 Industrial Wastewater Treatment (3). Characteristics and composition of industrial wastewaters. Sampling techniques and analyses. Water conservation and re-use. Joint industrial-commercial collection and treatment of wastewaters. Prerequisite: ENV 6516.

ENV 6615 Environmental Impact Assessment (3). An examination of alternative techniques useful for analysis and environmental impacts of man's activities. Environmental impact assessment methodologies are emphasized.

ENV 6916 Engineering Project (1-3). Individual work culminating in a professional practice-oriented report suitable for the requirements of the M.S. degree-project option. Only three credits are applicable towards degree. Prerequisites: Completion of 20 graduate credits and approved proposal.

ENV 6935 Graduate Environmental Seminar (1-3). The course consists of oral presentations made by students, guests, and faculty members on current topics and research activities in environmental systems.

ENV 6971 Thesis (1-6). Research for Master's thesis.

TTE 5007 Transportation Systems in Developing Nations (3). Transportation systems in the Developing Nations. Role of international organizations, technology trans-

fer/choices, orientation of transport networks, socio-economic and environmental impacts. Prerequisite: Graduate standing or permission of instructor.

TTE 5015 Applied Statistics in Traffic and Transportation (3). Civil and Environmental Engineering statistics methods as applied to traffic and transportation are covered. Topics include: significance tests, standard distributions, analysis of variance, and regression analysis. Prerequisite: Graduate standing.

TTE 5100 Transportation and Growth Management (3). Theory and principles of transportation and growth management, including the growth phenomena and regional impact planning. Design projects required. Prerequisite: TTE 4201.

TTE 5107 Highway Safety Analysis (3). Accident reconstruction, intersection analysis, highway safety standards, speed estimations from skidding, momentum/energy relationships, human factors. Prerequisites: STA 3033, TTE 4201.

TTE 5205 Advanced Highway Capacity Analysis (3). Parameters involved in calculating highway capacity and level of service on different highway and transportation facilities. Computer application will be also discussed. Prerequisite: TTE 4201.

TTE 5215 Urban Traffic Characteristics (3). Speed and volume studies, stream characteristics, traffic flow theory, accident characteristics. Prerequisite: TTE 4201.

TTE 5606 Transportation Systems Modeling and Analysis (3). Modeling and analysis techniques in transportation. Linear Programming, queueing theory, decision making techniques. Prerequisite: TTE 4201.

TTE 5607 Transportation Demand Analysis (3). Travel demand analysis and forecasting. Modeling techniques including trip generation and distribution, mode split, and trip assignment. Practical applications. Prerequisite: TTE 4201.

TTE 5805 Advanced Geometric Design of Highways (3). Parameters governing the geometric design of highways; curve super-elevation; widening on highway curves; elements of intersection design; design of interchanges; use of AASHTO design guidelines. Design project required. Prerequisite: SUR 4201.

TTE 5835 Pavement Design (3). Analysis and design of sub-base, base, and pavement of a roadway. Discussions of flexible pavement and rigid pavement as structural units. Boussinesq's approach. Westergaard's theory. Beams on Elastic Foundations. Prerequisites: CEG 4011 and CES 4702.

TTE 5925C Urban Traffic Workshop (3). Selected laboratory problems related to urban traffic. Prerequisite: TTE 4201.

TTE 5930 Transportation Seminar (1-3). Oral presentations made by students, guests, and faculty members on current topics and research activities in traffic and transportation engineering. Prerequisite: TTE 4201.

TTE 6257 Traffic Control Systems Design (3). Theory and principles of traffic control systems design, including both freeway and urban streets. Design projects required. Prerequisite: TTE 4201.

TTE 6506 Urban Mass Transit and Transportation Planning (3). Theories and principles of mass transit planning, include highway transit, rail transit and new transit modes. Design projects required. Prerequisite: TTE 5930.

TTE 6526 Airport Planning and Design (3). Theory and principles of airport planning and design, include both general aviation and major commercial airports. Design projects required. Prerequisite: TTE 5835 or consent of instructor.

TTE 6650 Transportation and Land Development (3). Theory and principles of transportation and land development, including site planning, traffic analysis, and access and site circulation. Design projects required. Prerequisite: TTE 4201.

TTE 6837 Pavement Management Systems (3). Theory and principles of pavement management systems (PMS), including PMS at network and project level, PMS strategies, and PMS software packages used for decision making process. Prerequisites: TTE 5835 or consent of instructor.

Electrical and Computer Engineering

Gustavo Roig, *Acting Chairperson
Associate Dean, and Associate
Professor*

Malek Adjouadi, *Associate Professor*

Jean Andrian, *Associate Professor*

Tadeusz Bobij, *Professor*

Armando Barreto, *Assistant Professor*

Manuel Cereijo, *Professor*

Thomas Gilbar, *Instructor and
Advisor*

Mark Hagmann, *Associate Professor*

Malcolm Heimer, *Associate
Professor and Associate
Chairperson*

W. Kinzy Jones, *Professor*

Grover Larkins, *Associate Professor*

Osama Mohammed, *Professor*

Sylvia Mergui, *Assistant Professor*

Abdul Samra, *Assistant Professor*

Pierre Schmidt, *Professor*

James Story, *Professor and
Associate Dean*

Subbarao Wunnava, *Professor*

Frank Urban, *Associate Professor*

Carolyn Van Vliet, *Professor*

Kang Yen, *Associate Professor*

Master of Science in Electrical Engineering

The Department of Electrical Engineering offers both thesis and non-thesis options for the Master's Degree. A student seeking the Master's degree with or without thesis is required to pass a comprehensive oral or written examination.

All work counted for the Master's degree must be completed during the five years immediately following the date of admission.

The program provides a broad education, covering more than one field, followed by in-depth studies of areas of interest. Multi-disciplinary programs such as Computer Engineering, Systems Engineering, and Biomedical Engineering are also available.

Admission Requirements

The following is in addition to the University's graduate admission requirements.

1. A student seeking admission into the program must have a bachelor's degree in engineering, physical sciences, computer science or mathematics from an accredited institution, or, in the case of foreign students, from an institution recognized in its own country as pre-

paring students for further study at the graduate level.

2. An applicant must have achieved a "B" average in upper level undergraduate work and a combined score of 1000 on the Graduate Record Examination (general test verbal and quantitative portions).

3. Applicants who have not satisfied the above will be evaluated by the departmental graduate admission committee for probationary or 10% waiver admission.

4. In addition to the above criteria, foreign students whose native language is not English, must take the Test of English as a Foreign Language (TOEFL) and obtain a score of 550 or better.

5. The GPA, GRE and TOEFL scores above are to be considered minimum requirements for admissions. Applicants from science areas other than electrical or computer engineering will be expected to complete sufficient background material at the undergraduate level prior to unconditional acceptance into the graduate program.

Graduation Requirements

The degree will be conferred when the following conditions have been met:

1. Recommendation of the advisor and faculty of the Department.

2. Certification by the Dean of the School that all requirements of the degree being sought have been completed.

3. A GPA of at least 3.0 has been earned for certain courses required by the program.

4. Met the undergraduate deficiencies, if any existed in the student's graduate program, as additional courses toward the degree.

5. Completed the required semester hours of graduate level credit (not more than six graduate semester hours with a grade of "B" or higher can be transferred from other accredited institutions).

6. Successful defense of an acceptable graduate thesis if required of the program.

7. Students must maintain an overall GPA of 3.0. No grade below "C" will be accepted in a graduate program. In the event that a student is placed on a probationary status, he or she must obtain a directed program from his or her advisor and approved by the Dean prior

to continuing further course work toward the degree. The student must satisfy the directed course of action within the prescribed time limit, otherwise he or she will be academically dismissed.

8. Complied with all University policies and regulations.

Thesis Option

A student must complete 30 semester credit hours of technical course work plus 6 semester credit hours of EEL 6971 - Master's Thesis. The candidate's supervisory committee shall approve an appropriate thesis topic.

The course requirements include a minimum of 12 hours of 6000-level course credit and a minimum of nine hours at the 5000-6000 level in Electrical Engineering. No more than six hours of Individual Work (EEL 6905) may be counted toward the degree.

Upon the successful completion of all course work, including thesis work, and after the determination by the student's advisor that he or she has completed the objectives of the thesis research, the student must pass a final oral examination which is primarily a defense of the thesis research. The candidate should limit the presentation to 40 minutes, unless told differently by the advisor. The essence of the thesis should be presented in the same manner as that of a technical paper at a conference.

The student must submit the thesis to the examining committee and department chairperson at least ten days prior to the oral examination date. Upon passing the oral examination, and completion of any changes or additions, or both, as required by the committee, each member of the committee will sign a special front page available in the Department. Hardcover bound copies should be submitted to the student's advisor and to the Library. The student should consult with the advisor for approval of all course work prior to registration.

Distance Learning Option

Students who are working in industry and cannot attend classes on campus can apply to complete the Master's Program through the Distance Learning Program. This program differs from the on-campus program in that the courses can be taken through FEEDS and distance learning modes. In addition, the degree requirements differ from the on-campus program in two respects. First of all, the student can petition

to be exempt from the thesis requirement, including the six credits it entails by substitution of industry research. Also, the candidate will be required to pass a comprehensive final examination. This exam may be administered at the work location and will be given by a committee selected by the department. The membership of this committee may include faculty and engineers from industry. The exam is intended to test the candidate's general ability in the areas of study and it will be given near the end of the candidate's final semester. A student who fails the exam may not attempt it again until one semester has elapsed or upon the completion of additional course work prescribed by the examining committee. The exam may be retaken only once.

Math Electives:

Select two courses with advisor approval.

EEL 5524	Statistical Communication Theory	3
EEL 6020	Numerical Analysis of Electrical Devices	3
MAA 4211	Advanced Calculus	3
MAA 4402	Complex Variables	3
MAD 3401	Numerical Analysis	3
MAP 4401	Advanced Differential Equations	3
MAP 5117	Mathematics and Statistics Modeling	3
STA 5446	Probability Theory I	3
STA 5447	Probability Theory II	3
STA 5800	Stochastic Processes for Engineering	3

The above list may be changed or expanded by the committee.

Remaining course work will be selected by the student and his advisor based on the student's career objectives.

Any course taken without the proper prerequisites and corequisites will be dropped automatically before the end of the term, resulting in a grade of "DR" or "DF".

Students who are dismissed from the University due to low grades, may appeal to the Dean for reinstatement. A second dismissal results in no possibility of reinstatement.

Master of Science in Computer Engineering

The Department of Electrical and Computer Engineering offers both thesis and non-thesis options for the Master's Degree in Computer Engineering. A student pursuing the Master's degree with or without thesis is required to pass a comprehensive oral or written examination and must complete all the required work during the five years immediately following the date of admission to the program.

The program requires that students entering this program have a strong background in math through differential equations, physics with calculus, engineering science, electrical engineering and computer hardware and software. The degree program will provide training in electrical engineering, specializing in computer hardware design as well as in software engineering.

Admission Requirements

Admission requirements to Computer Engineering are the same as listed under the Electrical Engineering Master's program.

Graduation Requirements

The degree will be conferred when the following conditions have been met:

1. Recommendation of the advisor and faculty of the Electrical and Computer Engineering Department.
2. Certification by the Dean of the College of Engineering and Design that all requirements of the degree being sought have been completed.
3. An overall GPA of at least 3.0 has been achieved for all graduate course work.
4. The undergraduate deficiencies, if any existed, have been met, as additional courses toward the degree.
5. Completed the required number of credits in engineering and computer science. Not more than six graduate semester hours with a grade of "B" or higher can be transferred from other accredited institutions.
6. Completed at least 12 credits of 6000 level and nine credits of 5000 or 6000 level in electrical and computer engineering.
7. Completed the remaining nine credits from computer science or engineering. Six credits maximum of 4000 level may be taken outside

the School of Engineering with advisor's approval.

8. All courses and thesis topics must be approved by the student's thesis advisor in consultation with the student's thesis committee.

9. Completed an acceptable graduate thesis if required of the selected program.

10. Students must maintain an overall GPA of at least 3.0. No grade below "C" will be accepted in any course taken to satisfy the graduate program requirements. In the event that a student is placed on a probationary status, he or she must obtain a directed program of studies from his or her advisor and approved by the Dean prior to continuing further into the degree. The student must satisfy the directed course of action within the prescribed time limit, otherwise he or she will be academically dismissed.

Thesis Option

A student must complete 30 semester credit hours of technical course work plus 6 semester credit hours of EEL 6971 - Master's Thesis. The candidate's supervisory committee shall approve an appropriate thesis topic.

The course requirements include a minimum of 12 hours of 6000-level course credit and a minimum of nine hours at the 5000-6000 level in Electrical Engineering. No more than six hours of Individual Work (EEL 6905) may be counted toward the degree.

Upon the successful completion of all course work, including thesis work, and after the determination by the student's advisor that he or she has completed the objectives of the thesis research, the student must pass a final oral examination which is primarily a defense of the thesis research. The candidate should limit the presentation to 40 minutes, unless told differently by the advisor. The essence of the thesis should be presented in the same manner as that of a technical paper at a conference.

The student must submit the thesis to the examining committee and department chairperson at least ten days prior to the oral examination date. Upon passing the oral examination, and completion of any changes or additions, or both, as required by the committee, each member of the committee will sign a special front page available in the Department. Hardcover bound copies should be submitted to the student's advisor and to the Library.

The student should consult with the advisor for approval of all course work prior to registration.

Distance Learning Option

Students who are working in industry and cannot attend classes on campus can apply to complete the Master's Program through the Distance Learning Program. This program differs from the on-campus program in that the courses can be taken through FEEDS and distance learning modes. In addition, the degree requirements differ from the on-campus program in two respects. First of all, the student can petition to be exempt from the thesis requirement, including the 6 credits it entails. Also, the candidate will be required to pass a comprehensive final examination. This exam may be administered at the work location and will be given by a committee selected by the department. The membership of this committee may include faculty and engineers from industry. The exam is intended to test the candidate's general ability in the areas of study and it will be given near the end of the candidate's final semester. A student who fails the exam may not attempt it again until one semester has elapsed or upon the completion of additional course work prescribed by the examining committee. The exam may be retaken only once.

Computer Engineering Courses

EEL 5718	Computer Communication Network Engineering
EEL 5725	Digital Systems Engineering I
EEL 5741	Advanced Microcomputer
EEL 6167	VLSI Design
EEL 6726	Digital Systems Engineering II
EEL 6575	Data Communications Engineering
EEL 6444	Optical Fiber Communications Systems
EEL 6505	Digital Signal Processing
EEL 6509	Digital Communications by Satellite
EEL 6253	Computer Analysis of Power Systems
EEL 6758	Engineering Design of Microprocessor Based Operating Systems
EEL 6821	Computer Vision

Electives Computer Science: (9)

Courses may be selected by student and advisor from 4000, 5000, and 6000 level Computer Science course listings.

The above lists may be changed or expanded by the supervisory committee.

Doctor of Philosophy in Electrical Engineering

Admission Requirements

The requirements for admission to the doctoral program in Electrical Engineering are:

1. Applicants having a Master's degree in Electrical Engineering from an accredited institution must satisfy the following requirements for admission to the doctoral program:

- GPA of at least 3.3/4.0 in the master's program
- GRE verbal plus quantitative of at least 1000 points
- Three letters of recommendation in the forms provided by the department
- TOEFL score of at least 550 points for non-English speaking natives.

2. Credentials of all other applicants will be examined by the Graduate Admission Committee on a case by case basis.

In addition to the departmental requirements, all students must satisfy the University's Graduate Policies and Procedures.

Identification of Research Area

Within 15 months upon acceptance into the Ph.D. program, the student has to identify an area of research of his or her interest by contacting and being accepted by a professor willing to guide the dissertation research. If no such professor can be found, the student will be dismissed from the Ph.D. program. Contact the Department for a list of the graduate faculty members and their research interests.

Course and Residency Requirements

Course Requirements

At least 90 credit hours beyond the bachelor's degree, including a maximum of 30 credit hours of course work, with a minimum grade of "B" in each course, earned in a Master's degree in Electrical Engineering received at FIU or another accredited institution. The credit hours earned

towards the Ph.D. program have the following requirements and restrictions:

- At least 12 credits of Ph.D. Course Breadth Requirements.
- At least 12 credits of course work at 6000 level of major field of interest.
- Registration for Advanced Research is allowed only after successfully having passed the written comprehensive examination.
- Registration for EEL 7980 (Research for Doctoral Dissertation) is allowed only after the student is admitted to candidacy. Twenty-four dissertation hours are required.
- At least 30 credit hours of 5000 or 6000 level electrical engineering courses are required. EEL 5935, 6905, 6912, 6932, 6971, 6977, and 7980 are not considered coursework for the purpose of this 30 credit hours requirement.
- Fifty percent of the hours accumulated have to be at the 6000 and 7000 level (including EEL 7980).

Residency Requirements

The Ph.D. student must spend at least one academic year in full-time residency. Usually, this will be after being admitted to Candidacy. To satisfy the residency requirement for a Ph.D. E.E. degree, the candidate must complete a minimum of 18 credit hours within a period of 12 months in residency at the University.

Graduate Supervisory and Research Committee

The student's Ph.D. Graduate Supervisory and Research Committee should be appointed as soon as possible and not later than 15 months after being admitted to the Ph.D. program. Consult the Graduate Guidelines in the Department for more details on how to select the committee members.

Ph.D. Course Breadth Requirements

All potential Ph.D. candidates are required to take two two-course sequences for a total of 12 credits outside of their major area and receive a grade of "B" or better in each course. The appropriate areas of study are determined by the dissertation advisor. The student must submit to the Graduate Coordinator the sequences selected when he or she signs up for the written part of the Ph.D. E.E. Comprehensive Examination.

Written Comprehensive Examination

To be eligible for the written comprehensive examination, the student must have satisfied the Ph.D. course breadth requirements in his or her area of specialization and in two other areas. Those students admitted into the Ph.D. program with an MSEE degree must take this exam before completion of 28 graduate credit hours of course work. Failure to do this is causation for dismissal from the Ph.D. program.

The student must pass all three areas of the examination. Failing one area implies failure of the entire examination. The exam must be re-taken the next time it is offered. Failing a second time is causation for dismissal from the Ph.D. program.

Consult the Graduate Guidelines available in the Department for details on examination procedures, dates, duration, application and grading criteria.

Oral Candidacy Examination:

To take the oral part of the candidacy examination, a student must be in good academic standing at the University, the Research Committee must certify that the student is capable of completing all required course work for the degree by the end of the semester in which the candidacy examination is taken and must have passed the written comprehensive examination.

This exam is usually taken within one year after the satisfactory completion of the written comprehensive examination and consists on the presentation and defense of the student's written research proposal.

Admission to Candidacy

Candidacy status indicates that a doctoral student is ready to commence writing the dissertation. A student is admitted to candidacy upon successfully completing all required coursework and passing the candidacy examination.

Oral Defense and Submission of Doctoral Dissertation

A dissertation is required of all candidates for the doctoral degree. A proposal must be submitted to the student's Research Committee for approval, following the general guidelines in the "Regulations for Thesis and Dissertation Preparation". A student must enroll for dissertation credits in the semester in which he or she expects to be admitted to candidacy, and must maintain con-

tinuous enrollment for not less than 3 credits of EEL 7980 every semester, including Summers, until the semester in which the doctoral degree is awarded. Upon completion of the dissertation, the degree candidate will submit to the Dean of Graduate Studies an application for dissertation defense signed by the student's Advisory Committee with sufficient time to allow for publishing a notice in the monthly calendar of dissertation and theses defenses to invite members of the university community to observe the defense.

Following the successful defense of the dissertation, as determined by a majority vote of the student's research committee, the dissertation must be forwarded to the Dean of the College of Engineering and Design and the Dean of Graduate Studies for their approval.

All dissertations submitted in fulfillment of requirements for graduate degrees must conform to University guidelines (see "Regulations for Thesis and Dissertation Preparation"). One final, approved copy of the dissertation must be delivered to the Chairperson of the Department of Electrical & Computer Engineering. Library copies must conform to University guidelines, also published in "Regulations for Thesis and Dissertation Preparation".

Financial Aid

Consult the Department for information on research and teaching assistantships available for doctoral students.

Course Descriptions

Definition of Prefixes

EEL - Engineering; Electrical

EEL 5071 Bioelectrical Models (3). Engineering models for electrical behavior of nerve and muscle cells, electrode-tissue junctions, volume conductions in tissue and the nervous system as an electrical network. Prerequisite: ELR 4202 or permission of instructor. (F)

EEL 5085 Bioradiation Engineering (3). Spectrum of radiation sources, types of fields, properties of living tissue, mechanisms of field propagation in tissue. Applications in imaging and therapy, hazards and safety. Prerequisite: EEL 4410 or permission of instructor. (S)

EEL 5145 Advanced Filter Design (3). Graduate course in the design and advance analysis of passive and ac-

tive high order circuits. Use of computer as a design tool. Prerequisite: EEL 4140 or permission of instructor. (S, alternating years).

EEL 5171 Advanced Systems Theory (3). State-space representations for continuous and discrete-time systems, controllability and observability, pole-zero allocation, Lyapunov stability theorem, state observers. Prerequisites: EEL 3657 and graduate level or advanced senior standing or permission of instructor. (S)

EEL 5270 Electrical Transients in Power Systems (3). Traveling waves on transmission and multi-conductor systems, successive reflections, distributed parameter systems, transients on integrated power systems. Prerequisite: EEL 4213 or permission of instructor.

EEL 5275 Power Systems Protection (3). Analysis of power systems under faulted conditions using linear transformation. The study of surge, transient and waves on power lines. Computer-aided analysis and design emphasizing the protection of equipment. Prerequisite: EEL 4215 or permission of instructor. (F)

EEL 5348 Digital Electronics (3). Analysis and design of logic gates using saturated and non-saturating elements, transmission gates, interfacing of logic families, bistable circuits, A/D and D/A converters. Prerequisite: EEL 4304.

EEL 5352 Bipolar Junction Transistors (3). Bipolar junction transistor physics. Semiconductor bulk properties at equilibrium and nonequilibrium. PN junction theory. Theory of the bipolar junction transistor. Prerequisite: EEL 3396 or permission of instructor. (S)

EEL 5353 Field Effect Transistors (3). Field effect device physics and technology. MOS capacitor. DC and AC characteristics of the MOS transistor. The MOS transistor in dynamic operation. Prerequisites: EEL 3396 or permission of instructor. (F)

EEL 5366 Industrial Electronics (3). A study of solid state devices for the control of power, their applications and limitations in power switching circuits and in the control of physical transducer. Prerequisites: EEL 4213, EEL 4304 or permission of instructor. (F, every third year)

EEL 5371 High Frequency Amplifiers (3). Analysis and design of high frequency amplifiers and oscillators: stability, scattering parameters, use

of the Smith chart and other practical design tools, noise. Prerequisites: EEL 4304, EEL 4410 or permission of instructor. (F, every third year)

EEL 5437 Microwave Engineering (3). Microwave guides, Microwave tubes, Microwave solid state devices, Microwave integrated circuits, Microwave enclosures. Prerequisite: EEL 4410 or permission of instructor. (S, every third year)

EEL 5482 Fields and Waves Engineering (3). Concepts and theorems in fields and waves, analytic techniques for guided waves, radiation and scattering, numerical techniques for analysis of electrical devices using digital computers. Prerequisite: EEL 4410 or permission of instructor. (S)

EEL 5500 Digital Communication Systems I (3). This course will consider most important aspects of digital communication systems such as noise related subjects, random signals, linear systems, and baseband digital modulation and multiplexing. Prerequisites: EEL 3135, EEL 3514, EEL 3112 or permission of instructor. (SS)

EEL 5501 Digital Communication Systems II (3). This course will consider more important aspects of digital communication systems such as matched filters, digital base and modulation, multiplexing, carrier digital modulation and error correction coding. Prerequisite: EEL 5500 or permission of instructor. (F)

EEL 5524 Statistical Communication Theory (3). Noise, random processes, correlation, spectral analysis in the analysis and design of communication systems. Optimization techniques, minimum mean square error. Prerequisite: EEL 3514. (SS, alternating years)

EEL 5563 Introduction to Optical Fibers (3) Use of fiber optics as a communication medium. Principles of fiber optics: mode theory; transmitters, modulators, sensors, detectors and demodulators, fiber data links. Prerequisites: EEL 3514, EEL 4314 and EEL 4410 or permission of instructor. (F, alternating years)

EEL 5653 Digital Control Systems (3). Analysis and design of digital control systems Z-transforms, analysis and control of discrete-time systems, digital control of analog systems. Several digital controller design methods. Computer simulation and microprocessor implementation. Pre-

requisite: EEL 3657. Corequisite: EEL 4611 or permission of instructor. (SS)

EEL 5718 Computer-Communication Network Engineering (3). System engineering synthesis, analysis, and evaluation of computer-communication networks. Network design, routing and flow control, telecommunication traffic engineering, transmission, switching, etc. Prerequisite: EEL 5501 or permission of instructor. (SS)

EEL 5719 Digital Filters (3). Analysis, design and implementation of digital filters. Hardware and software approach to design. Prerequisites: EEL 4709 or permission of instructor. (F)

EEL 5725 Digital Systems Engineering I (3). This course involves systematic studies of digital instrumentation, digital control, digital communication systems concepts and case studies. Prerequisites: EEL 4304, EEL 4746 or equivalent or permission of instructor. (F)

EEL 5741 Advanced Microprocessor Systems (3). Interfacing of various microprocessors together. Concepts of master-slave systems, virtual memory and I/O control techniques. Digital system evaluation and optimization. Prerequisite: EEL 4746 or permission of instructor. (SS, alternating years)

EEL 5810 Neural Networks - Algorithms and Applications (3). Various artificial neural networks and their training algorithms will be introduced. Their applications to electrical and computer engineering fields will be also covered. Prerequisite: MAC 3312. (SS)

EEL 5820 Digital Image Processing (3). Human vision, digital imaging, image transforms, image enhancement, image restoration, image compression, edge detection, shape analysis, depth information, texture analysis, and vision systems. Prerequisites: EEL 3135 and knowledge of any programming language (FORTRAN, Pascal, C). (F)

EEL 5935 Advanced Special Topics (1-3). A course designed to give groups of students an opportunity to pursue special studies in an advanced topic of Electrical Engineering not otherwise offered. Prerequisite: Consent of instructor.

EEL 6020 Numerical Analysis of Electrical Devices (3) Numerical techniques for the analysis of static and diffusion eddy current type field problems and associated phenom-

ena in electrical devices. Emphasis on implementation and applications to practical problems. Prerequisites: EEL 4213, MAP 3302 or equivalent or permission of instructor. (S)

EEL 6075 Biosignal Processing I (3). Characterizing biosignals by application of time and frequency domain analytic methods. Comparison of analog and digital processing. Engineering design for VLSI implementations in implantable devices. Prerequisites: EEL 4202 and EEL 6505 or permission of instructor. (F)

EEL 6076 Biosignal Processing II (3). Engineering design of advanced systems for processing biosignals. Methods for signal compression. Adaptive systems for automatic recognition. Application of artificial intelligence for signal classification. Prerequisite: EEL 6075 or permission of instructor. (S)

EEL 6141 Advanced Network Analysis (3). Modeling and analysis of networks by t-domain and s-domain techniques. Topics include topology, formulation of loop eqs and node pair eqs., state space networks, computer solutions. Prerequisite: EEL 3112 and FORTRAN or permission of instructor. (S, every third year)

EEL 6167 VLSI Design (3). Study of VLSI Design concepts in MOS/CMOS environment, CAD techniques, VLSI array processors and wavefront array processors, and implementation of array processors. Prerequisites: EEL 5741, EEL 4314. (SS, alternating years)

EEL 6216 Application of Intelligent Systems to Power System Operations (3). Power system security assessment using intelligence systems techniques such as pattern recognition, expert systems, and neural networks. Class projects include applying IS to load forecasting, alarm processing. Prerequisites: EEL 4214, EEL 6273. (SS, alternating years)

EEL 6235 Motor Drives Control (3). Switched, resonant and bidirectional power supplies, DC motors: single, three phase and chopper drives. AC motors: voltage, current and frequency control. Closed loop control. Prerequisites: EEL 4213, EEL 3303, EEL 3657. (SS, alternating years)

EEL 6253 Computer Analysis of Power Systems (3). Power systems analysis and designs by computer

solutions. Interactive solutions, power flow, optimum solutions. Dynamic solutions and stability. Prerequisite: EEL 4215 or permission of instructor. (F, every third year)

EEL 6254 Power Systems Reliability (3). Expansion planning, load forecasting, reliability and availability application to generation planning, bulk power supply systems, generation system operation and production costing analysis. Prerequisite: EEL 4215 or permission of instructor. (S)

EEL 6261 Power Systems Engineering (3). Steady-state analysis, fault studies, load flow, dynamic and transient performance, on-line control, practical applications. Prerequisite: EEL 4215 or permission of instructor. (SS, every third year)

EEL 6273 Power System Stability and Control (3). Direct methods for system stability, computer analysis of large scale models, Lyapunov stability, longer term stability, security analysis, MW-frequency control, isolated and multiple area control. Prerequisites: EEL 4215 and FORTRAN or permission of instructor. (S)

EEL 6311 Advanced Electronic Systems I (3). Principles of analog and digital electronics network. Advanced analysis, modeling and computer simulation of op amps. Analog design techniques and practical examples are covered. Prerequisite: EEL 4314 or permission of instructor. (F, alternating years)

EEL 6312 Advanced Electronic Systems II (3). Study of linear properties of electronic systems and design of fault tolerant systems using A/D and D/A and control algorithms. Prerequisite: EEL 6311 or permission of instructor. (S, alternating years)

EEL 6315 Advanced Solid State Electronics (3). IC technologies, properties and fabrication concepts. Bipolar, MOS, I²L, CCD, bubble technologies. Ion implantation characteristics. Lithography techniques. Prerequisite: EEL 3396, EEL 4304 or permission of instructor. (SS, every third year)

EEL 6332 Thin Film Engineering (3). Thin films used in microelectronics and optoelectronics; deposition methods; evolution of film microstructure; film growth modeling; introduction to film analysis. Prerequisite: EEL 3396. (SS, alternating years)

EEL 6335 Electrical Transport in Semiconductors I (3). This course focuses on carrier transport fundamentals, beginning at the microscopic level and progressing to the macroscopic effects relevant to semiconductor devices. Prerequisites: EEL 5352, PHY 4604. (F, alternating years)

EEL 6395 Applied Superconductivity (3). Covers the basic physical properties of superconductors. Superconducting devices: squids, memory & logic elements. Emphasis is placed on applications of superconductors. Prerequisites: EEL 3396 and EEL 4410. Corequisite: EEL 6315, EEL 3397 or permission of instructor. (S)

EEL 6397 Semiconductor Device Theory (3). Device physics and modeling of GaAs FETs. GaAs analog and digital integrated circuits. Modulation doped field effect transistors. Heterojunction bipolar transistor theory. Prerequisite: EEL 3396. (S)

EEL 6399C Electronic Properties of Materials (3). Properties of materials from which electronic components and structures are fabricated; electrical conduction in metals, semiconductors and insulators; thermal; magnetic; optical. Prerequisite: EEL 3396. (F, alternating years)

EEL 6443 Electro-Optical Devices and Systems (3). Introduction to optical devices and systems such as solid state laser systems, their applications in industry. Also holography, linear and non-linear optical modulation and demodulation concepts. Prerequisites: EEL 4410, EEL 4314. Corequisite: EEL 5563 or permission of instructor. (S, every third year)

EEL 6444 Optical Fiber Communication Systems (3). Course focuses on specification, design and application of fiber optic communication systems considering the fiber optic wave guide, optical device sources, photo-detector, receiver and transmitter designs. Prerequisite: EEL 5501 or permission of instructor. (S, every third year)

EEL 6463 Antenna Theory and Design (3). Radiation patterns of dipoles and loops, array analysis and synthesis, self-impedance and mutual impedance, frequency independent antennas and antenna miniaturization, and reflectors and lens antenna. Prerequisite: EEL 4410. (S, alternating years)

EEL 6505C Digital Signal Processing (3). Treatment of digital signal and system characteristics: Z transforms

and FFT theory. Real time and correlation functions. Multidimensional signal processing and digital filtering. Prerequisites: EEL 4510, EEL 4314, EEL 5653 or permission of instructor. (F)

EEL 6509 Digital Communications by Satellite (3). This course will consider processing and non-processing transponders, earth terminals, propagation link characteristics, multiple access techniques, and spread spectrum techniques. Prerequisite: EEL 5501 or permission of instructor. (S)

EEL 6572 Pictorial Information Systems Design (3). Picture input device design, pictorial information systems hardware, picture processor design, picture storage system design, pictorial database system design, picture communication interface design, and engineering applications. Prerequisites: EEL 4709 or CDA 4400. (SS)

EEL 6575 Data Communications Engineering (3). Digital networks for data communications, CCITT, HDLC, SDLC. Real time switching techniques. Microprocessor based network topologies. Busing schemes such as VME, MULTIB, RS232. Prerequisites: EEL 4746 and EEL 4314 or permission of instructor. (F)

EEL 6614 Modern Control Theory I (3). Graduate level treatment of modern control systems. Optimal control of feedback systems. Performance measures, Pontryagin's minimum principle, dynamic programming, numerical techniques. Prerequisite: EEL 5171 or permission of instructor. (F, alternating years)

EEL 6615 Modern Control Theory II (3). Graduate level course in Stochastic control. Stochastic processes, linear estimation, Kalman filtering techniques in state estimation. Design of feedback control in the presence of noise. Prerequisite: EEL 6614 or permission of instructor. (S, alternating years)

EEL 6673 Identification Theory (3). System modeling, off-line methods, on-line methods, order and structure determination, diagnostic tests and model validation. Prerequisite: EEL 5171. (F, alternating years)

EEL 6726 Digital Systems Engineering II (3). Analysis and design of time shared digital electronic systems. Artificial intelligence and automation. Robotics and remote control systems. Advanced digital instrumentation and testing. Prerequisite: EEL

5725 or permission of instructor. (S, every third year)

EEL 6758 Engineering Design of Microprocessor Based Operating Systems (3). Hardware microprocessor based systems, BIOS (basic input and output), Kernel partitions, memory, stack organization and physical design of operating systems. Prerequisites: EEL 4709 and EEL 4746 or permission of instructor. (S, every third year)

EEL 6812 Advances in Neural Networks (3). Latest concepts in artificial neural networks research and newly developed applications. Implementation, convergence in learning algorithms, accuracy refinement, and optimal structure of neural networks. Engineering applications. Prerequisite: EEL 5810. (F, alternating years)

EEL 6821 Computer Vision (3). Mathematical foundation and design considerations of Computer Vision. From understanding of the visual machinery of the brain to the practical design of computer vision software/hardware. Prerequisite: EEL 5820. (S)

EEL 6870 Intelligent Computer Design (3). Fuzzy logic hardware, self-testing computer design, easily testable computer design, fail safe computer design, fuzzy neural networks, design implementation, applications of fuzzy neural networks, and real time applications. Prerequisite: EEL 4709. (F, alternating years)

EEL 6905 Individual Work (1-4). Special problems or projects selected by the students and a faculty member. The student conducts the project with a minimum of supervision. Consent of Department Chairperson and Faculty Advisor.

EEL 6916 Graduate Project (1-3). Independent research work culminating in a professional practice-oriented report for the requirements of the non-thesis option of the M.S. degree project. Prerequisites: Fifteen graduate credits and approved project plan.

EEL 6931 Special Topics In Electrical and Computer Engineering (1-3). Course covers advanced topics not in existing graduate courses in electrical and computer engineering. Prerequisite: Permission of instructor.

EEL 6932 Graduate Seminar (1). An examination of recent technical findings in selected areas of concern. Emphasis is placed on presen-

tations (oral and written), research activities, readings, and active discussions among participants. Prerequisite: Consent of graduate advisor.

EEL 6971 Research Master's Thesis (1-6). The student, following the option of the Master's Degree with thesis, should work for his/her thesis through this course. Prerequisite: Graduate standing.

EEL 6977 Extended Thesis Research (0). For Graduate research students who have completed their sequence of thesis credits, but must register for a course to remain on graduate student status.

EEL 7980 Dissertation (3-12). Doctoral research leading to Ph.D. Electrical Engineering Dissertation. Prerequisite: Permission of graduate committee.

Industrial and Systems Engineering

Shih-Ming Lee, Associate Professor,
Chairperson

Martha Centeno, Assistant Professor

Chin-Sheng Chen, Professor

Joe Chow, Associate Professor

Julie Jacko, Assistant Professor

Khokiat Kengskool, Associate
Professor

Sergio Martinez, Instructor

Marc Resnick, Assistant Professor

Fredrick Swift, Professor

Master of Science In Industrial Engineering

Marc Resnick, Coordinator

The Master of Science program in Industrial Engineering emphasizes research, as well as course work, and the graduate degree is intended to prepare students for the professional practice of Industrial Engineering.

Admission requirements

The student must meet all University graduate admission requirements. In addition, he or she must also:

1. Have a BS in engineering from an accredited institution or must take prerequisites as required to remedy deficiencies.
2. Must have a "B" average in the last 60 hours of undergraduate work and have a combined score of 1000 on the Graduate Record Examination (verbal and quantitative combined).
3. Applicants meeting only one of the two requirements in no. 2 will be evaluated by the department admissions committee for probationary admissions. Industrial experience and special research will be considered.
4. Foreign students must take the test of English as a foreign language (TOEFL) and obtain a score of 500 or better.
5. Waiver under the 10% rule may be requested if the minimum GPA or GRE are not met. Students admitted under the 10% exception rule will be placed on probation and will be evaluated at the end of 9 credit hours for continuation.
6. Students with degrees from disciplines other than engineering will be required to take additional courses as needed in math, natural sciences and basic engineering.

Available Areas of Concentration

Human Factors/Ergonomics
Integrated Manufacturing
Operations Research/Systems Engineering

Course requirements

Each MSIE student is required to take a minimum of 31 graduate credit hours to complete the degree program. The one hour credit Graduate Seminar (EIN 6932) is a required course to all MSIE students. Each student is required to select a concentration area as part of the seminar course. Pre-requisite and graduate core courses for each concentration area are specified in the following sections. Elective graduate courses are selected by the student with the approval of the thesis advisory committee to support thesis work.

Human Factors/Ergonomics Area

Human Factors is concerned with the design of jobs, consumer products, computer interfaces, machines, machine operations, and work environments, so that they are fully compatible with human characteristics, capacities, limitations and idiosyncrasies. Human Factors practitioners, operating within industrial, commercial, governmental and health organizations are called upon to apply existing human performance knowledge to the design or modification of equipment, and also to generate new experimental data required for equipment design. Accordingly, the MSIE concentration in Human Factors emphasizes both existing content areas and detailed experimental research methodology. Students in this area must have the following pre-requisite courses:

EGN 3123	CAD or equivalent	
EIN 3235	Evaluation of Engineering Data or equivalent	
EGN 3311	Statics or equivalent	
EIN 4243	Human Factors	
EIN 4214	Work Design and Ergonomics	
and must take the following core courses:		
EIN 6392	Graduate Seminar	1
EIN 6248	Advanced Ergonomics	3
EIN 6319	Advanced Work Design	3
EIN 5249	Occupational Biomechanics	3
EIN 6971	Master's Thesis	6

Elective graduate courses 15

Integrated Manufacturing Area

The Integrated Manufacturing area reflects a broad interpretation of the role of a manufacturing engineer. This concentration is developed to include product and process design, production planning and scheduling, material flows control, product quality, facilities planning, materials handling, material selection, and manufacturing processes. It emphasizes manufacturing automation, information modeling, and computer based integration of the above manufacturing functions in design, planning, and control of modern manufacturing systems. Students in this area must have the following prerequisite courses:

EIN 3390	Manufacturing Processes	
EGN 3123	CAD	
ESI 3314	Generic Models I or equivalent	
EGN 3365	Materials in Engineering	

and must take the following core courses:

EIN 6932	Graduate Seminar	1
EIN 6398	Advanced Manufacturing Process Engineering	3
EIN 6392	Product Design for Manufacturability and Automation	3
ESI 6316	Applications of OR in Manufacturing	3
EIN 6971	Master's Thesis	6
Elective graduate courses		15

Operations Research/Systems Engineering Area

Operations research deals with the development and application of quantitative techniques to model, analyze, and design complex systems. Students in this area must have the following pre-requisite courses:

EIN 3235	Evaluation of Engineering Data or equivalent	
EIN 3354	Engineering Economy	
ESI 3523	Simulation Models of Industrial Systems or equivalent	

and must take the following core courses:

EIN 6932	Graduate Seminar	1
ESI 6316	Applications of OR In Manufacturing	3
STA 6246	Data Analysis I	3

ESI 6524	Applied Industrial Systems Simulation	3
EIN 6971	Master's Thesis	6
Elective graduate courses		15

Manufacturing Engineering Track

Chin-Sheng Chen, Program Coordinator

The track program is tailored for engineers in the manufacturing industry or those entering the industry. It is an interdisciplinary and terminal degree program with its emphasis on practices and hands-on experience. Students will be exposed to a full range of manufacturing engineering functions and equipped with the knowledge and skills required to design, operate, and improve manufacturing systems of today and tomorrow.

Admission requirements

The student must meet all University graduate admission requirements. In addition, he or she must also:

- 1) have a Bachelor of Science degree in engineering or a closely related field from an accredited institution,
- 2) have a "B" average in the upper level course work and a score of 1000 on the Graduate Record Examination (verbal and quantitative combined).

Applicants who meet all other required criteria, except for requirement 1) or 2) above, may be evaluated for provisional admission. Applicants who meet all criteria except for requirements 1) and 2) above, may be evaluated for admission under the BOR 10% policy waiver. In addition to the above criteria, foreign students whose native language is not English must take the Test of English as a Foreign Language (TOEFL) and obtain a score of 500 or better.

Program requirements

The Manufacturing Engineering track program requires 31 semester hour credits of course work and completion of an industrial project. The one hour credit Graduate Seminar is a required course to all MSIE students. Each student's program of study will be designed to fit the student's goal, and approved by the program coordinator and the student's project advisory committee. Each student must take the following four manufacturing engineering core courses (or credits) and complete an industrial project as detailed in the Student's Manual.

ENG 5214	Manufacturing Engineering
EGN 5126	Industrial Materials and Engineering Design
EGN 6213	Manufacturing Systems Design
EGN 6971	Master's Project.

In addition, each student must meet the following course requirements.

1. a graduate course (3 credits) from the product and process design area,
2. a graduate course (3 credits) from the manufacturing operations management area,
3. two graduate courses (6 credits) from the manufacturing processes and control area, and
4. two graduate courses (6 credits) from the manufacturing systems design and operations area.

Listings of recommended courses

The courses listed below for each of the four subject areas represent recommended courses only. The student may elect other non-listed graduate courses to meet the program requirements. However, he/she must first consult the academic advisor concerning deviations from these recommendations. Any elective course must fulfill the purpose of the Manufacturing Engineering program which is designed to ensure a breadth of manufacturing knowledge as well as an in-depth exposure to the fundamentals of manufacturing engineering in a selected area.

Product and Process Design

EEL 6167	VLSI Design
EIN 5332	Quality Engineering
EIN 6392	Product Design for Manufacturability and Automation
EML 5530	Intermediate CAD/CAE
EML 6532	Advanced CAD/CAE
EML 5509	Mechanical Design Optimization
EML 6805	Advanced Design of Robots
EGN 5842	Product Modeling

Manufacturing Operations Management

ACG 6026	Accounting for Managers
EIN 5322	Engineering Management
EIN 5359	Industrial Financial Decisions
EIN 6428	Financial Management
MAN 6245	Organizational Behavior

MAN 6321	Personnel Selection and Placement
MAN 6351	Personnel Training and Development
MAN 6405	Labor Relations
MAN 6411	Collective Bargaining
MAN 6585	Productivity Management Seminar
MAN 6608	International Business
MAN 6617	Managing Global Production and Technology
MAN 6726	Strategic Management
MAN 6805	Entrepreneurship
MAN 7275	Organizational Behavior Management
MAN 7305	Human Resources Management
MAN 6051	Organization and Management Process

Manufacturing Processes and Control

EEL 5366	Industrial Electronics
EEL 5718	Computer Communication Network Engineering
EEL 5741	Advanced Microprocessor Systems
EEL 5820	Digital Image Processing
EEL 6207	Dynamic Analysis of Electrical Machines
EEL 6443	Electro-optical Devices and Systems
EEL 6666	Intelligent Electronic Machine Design
EEL 6821	Computer Vision
EGN 6212	Manufacturing Process Design
EIN 6397	Advanced Topics in Manufacturing Automation
EIN 6398	Advanced Manufacturing Process Engineering
EGM 5354	Finite Element Method Application
EMA 5935	Advanced Topics in Material Engineering
EML 5385	Identification Techniques of mechanical Systems
EML 5562	Advanced Electronic Packaging
EML 5825	Sensors and Applied Machine Intelligence

Manufacturing Systems Design and Operations

EIN 5605	Robotic Assembly Cell
EIN 6117	Advanced Industrial Information Systems
EIN 6367	Design of Production Systems
EIN 6319	Advanced Work Design
EIN 6345	Inventory Control Systems
EIN 6357	Advanced Engineering Economy
EIN 6316	Advanced Production Planning and Control
ESI 6316	Application of OR in Manufacturing
ESI 6524	Applied Industrial Systems Simulation

Engineering Management

Gordon R. Hopkins, *Director*
 Shih-Ming Lee, *Program Coordinator*
 Irma B. Fernandez, *Assistant Coordinator*

Master of Science in Engineering Management

The Master of Science program in Engineering Management is directed toward an academic preparation of technical individuals who will remain working in a technological environment while advancing into management roles. When engineers want to move into a management career, they often find that they lack certain skills for such positions. The emphasis on accuracy, the use of sound scientific methods, and the solution of technical problems through individual skills, are some functions for which engineers are well prepared. However, these functions fundamentally differ from managerial functions. To become successful managers, most engineers must learn new skills and broaden their problem approach perspectives.

The Engineering Management program develops technical management skills by combining qualitative approaches and quantitative skills in a balanced curriculum. It emphasizes a practical, systematic, and programmatic educational environment so that future managers of engineering and technology will be technically competent and business-practice oriented.

The students entering this proposed program should have a

bachelor degree in one of the science or engineering disciplines.

Admission Policies

The student must meet all University graduate admission requirements. In addition:

1. Prospective students are expected to meet all admission requirements of the University's graduate school.
2. A student seeking admission into the graduate program must have a bachelor's degree in engineering or sciences from an accredited institution.
3. An applicant must have achieved a GPA of 3.0 in upper division coursework, and a combined verbal and quantitative score of 1,000 on the Graduate Record Examination (GRE).
4. Applicants who satisfy both GPA and GRE requirements will receive full admission status.
5. Applicants who fail to meet the GPA requirement, but satisfy GRE requirement, could be admitted provisionally. The provisional status shall change to full admission if the student has a GPA of 3.0 upon completion of nine graduate credit hours.
6. Applicants who fail to meet the GRE requirement, but satisfy GPA requirement, could be admitted provisionally. The provisional status shall change to full admission when the student passes the GRE with a score of 1,000.
7. Applicants who do not meet either GPA, nor GRE requirement could petition for admission under the 10% waiver category.
8. In addition to the above criteria, foreign students whose native language is not English must take the Test of English as a Foreign Language (TOEFL) and obtain a score of 550 or better.

The GRE, TOEFL, and GPA are considered as minimum requirements for admissions. Students backgrounds shall be analyzed to determine if there is a need for remedial courses in addition to the required curriculum. Students are also expected to comply with all course prerequisites.

Degree Requirements

The basic program will consist of 36 credit hours as follows: A core of 12 credit hours of the engineering management and 12 credit hours of the business, 9 credit hours of advised electives in any of the engineering

disciplines, an engineering management capstone project.

Engineering Management Core Courses

Students in the proposed program are required to take four courses (12 credit hours) from the following subjects. These courses serve as the foundation for the future engineering/technology managers.

EIN 5322	Engineering Management	3
EIN 5226	Total Quality Management	3
EIN 6117	Advanced Information Systems	3
ESI 5451	Engineering Project Management	3

Business Core Courses

Students in the program are required to take four courses (12 credit hours) from accounting, finance, organizational behavior, and marketing (one from each subject area). These courses prepare engineers for business practices.

ACG 6026	Accounting for Managers	3
ACG 6175	Financial Reporting and Analysis	3
FIN 6428	Financial Management	3
FIN 6455	Financial Modeling and Forecasting	3
MAN 6245	Organizational Behavior	3
MAN 6204	Organization Management Theory	3
MAR 6805	Marketing Management	3
MAR 6816	Strategic Marketing Management	3
MAR 6158	International Marketing	3

Engineering Electives

Students in the program are required to take three courses (9 credit hours) from engineering subjects of interest, for example, 'telecommunications'. These engineering elective courses will broaden and deepen the student's understanding of technology development. The student's advisory committee will select the elective courses.

Engineering Management Capstone Project

The program is structured as a non-thesis program. However, students in the program are required to conduct an industrial project (3 credit hours) to complete the degree pro-

gram. The Engineering Management project covers contemporary topics and trends in technology development.

Grades and Credits

Students are required to maintain a GPA of 3.0. Courses with a grade below 'C' will not be counted toward the Master of Science in Engineering.

Transfer Credit

The may receive permission to transfer up to a maximum of six semester credits provided that: (1) the courses were taken at the graduate level at an accredited college or university; (2) with a grade of 'B' or better; (3) the courses were judged relevant by the student's advisory committee; (4) the credits were not used toward another degree; and (5) the credits were completed within seven years immediately preceding the awarding of the degree. Credits are transferable until the student has earned 12 semester hours in the Engineering Management program.

Time Limit

All works applicable to the Master of Science degree in Engineering Management, including transfer credits, must be completed within seven years immediately preceding the awarding of the degree.

Note: Please see the section of the College of Business Administration for a description of the Business core courses.

Course Description

Description of Prefixes

EGN-Engineering, General EIN-Engineering, Industrial; ESI-Engineering Systems Industrial.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

EGN 5435 Product Modeling (3). Life cycle product data, geometry and form features, product information models and modeling techniques, product modeling systems, and product data standards. Prerequisites: EGN 3123 or equivalent.

EGN 6436 Manufacturing Process Design (3). Resources modeling, process plan modeling, and planning methodologies for process selection, operations selection, machining parameters selection, setup planning, and inspection planning. Prerequisites: EGN 5842.

EGN 6437 Manufacturing Systems Design (3). System design for production and process planning, resource management, material handling, process control, and quality control. Prerequisite: Permission of instructor.

EGN 6438 Manufacturing Engineering (3). Manufacturing functions, product and process design, material processing and control, systems design and operations, resource and technology management, and analytical tools for manufacturing. Prerequisites: EIN 3390 or equivalent. (F)

EGN 6971 Master's Project (1-3). Individual work culminating in a professional practice-oriented report suitable for the requirements of the Master of Science in Manufacturing Engineering program.

EIN 5106 Regulatory Aspects of Engineering (3). A survey of the legal and regulatory requirements encountered by engineers. Included will be OSH Act, NIOSH, ADA, EEOC, Worker's Compensation and Product Liability. Prerequisite: Senior standing.

EIN 5226 Total Quality Management for Engineers (3). Fundamentals of TQM and its historical development. Integration of QC and management tools, QFD, benchmarking, experimental design for scientific management. (S)

EIN 5249 Occupational Biomechanics (3). Study of the theoretical fundamentals for the mechanics of the body. The link system of the body and kinematic aspects of body movement including applications of biomechanics to work systems. (S)

EIN 5322 Engineering Management (3). Organization of engineering systems including production and service organizations. Inputs of human skills, capital, technology, and managerial activities to produce useful products and services. (F)

EIN 5332 Quality Engineering (3). This course examines quality control from an engineering standpoint. It covers ways to meet the challenge of designing high-quality products and processes at low cost. Prerequisite: EIN 3331 or equivalent. (S)

EIN 5359 Industrial Financial Decisions (3). The use of financial techniques and data in planning, controlling and coordinating industrial activities. This course will familiar-

ize the student with accounting concepts and analytical methods. Prerequisite: EIN 3354. (SS)

EIN 5367 Design of Production Systems (3). The design of an industrial enterprise including feasibility, plant layout, equipment specifications, auxiliary services, economics and scheduling. Prerequisite: EIN 3365. (SS)

EIN 5392 Design and Implementation of Discrete Manufacturing Systems (3). Methodology and techniques for design, planning and implementation of discrete production systems including process/machine selections, material handling and inspection technologies, cell control, etc. Prerequisites: Graduate or seniors with EIN 3365, EIN 3390, and ESI 3523 or equivalent.

EIN 5605 Robotic Assembly Cell (3). Concepts of robot manipulation and sensing, part design for robotic assembly, planning manipulator trajectories, machine vision, robot programming language, cell control, and material transfer. Prerequisite: EIN 3600. (S)

EIN 6117 Advanced Industrial Information Systems (3). Review of the fundamental and theoretical foundation of industrial information systems. Application of the system design process and information system concepts to develop integrated engineering systems. (F)

EIN 6248 Advance Ergonomics (3). Analysis of human factors in the design of engineering systems, with emphasis on the interphase of man-machine-media and human limitations in relation to equipment design and work environments. Prerequisites: EIN 4314, EIN 4243, and PCB 3702 or equivalent. (F)

EIN 6258 Ergonomic Design of Aerospace Systems (3). Application of ergonomic criteria in design of civil and military aircrafts cockpits and control systems. Ergonomic consideration in design of outer space vehicles, stations, and systems. Prerequisite: EIN 6248.

EIN 6319 Advanced Work Design (3). Study of the various human physiologic systems and their responses as it relates to occupational work including endurance, fatigue, recovery, and energy cost of work. Prerequisites: EIN 6248. (S)

EIN 6336C Advanced Production Planning and Control (3). Analytical and algorithmic planning method-

ologies, planning and scheduling technologies, sequencing rules, control strategies, and line balancing methods. Prerequisite: EIN 4334.

EIN 6345 Inventory Control Systems (3). Design of non-traditional inventory control systems. Development of several inventory system models. Exploration of methods of collecting appropriate demand and cost data for effective systems analysis. Prerequisite: ESI 3314. (F)

EIN 6357 Advanced Engineering Economy (3). Review of engineering economy and the evaluation of advanced manufacturing systems. Evaluation of alternative capital investments considering income taxes, depreciation, inflation, risk and uncertainty. Prerequisite: EIN 3354. (SS)

EIN 6392 Product Design for Manufacturability and Automation (3). Overview and integration of the design-material-manufacture process. Design considerations for manufacturability, assembly, and economical production. Concurrent engineering systems. Prerequisite: EIN 4395. (S)

EIN 6397 Advanced Topics in Manufacturing Automation (3). Overview of manufacturing systems; evolution of controls and AI; material handling; automation clamps, jigs, and fixtures; cutting sensors; machine vision and autonomous manufacturing. Prerequisites: EIN 6392 and EIN 6398.

EIN 6398 Advanced Manufacturing Process Engineering (3). Non-traditional manufacturing processes. Tool selection. Jig and fixture design. Material handling. Tolerance and dimensioning. Product assembly. Engineering economics. Manufacturing process planning. Prerequisite: EIN 3390. (F)

EIN 6603 Applied AI/Expert Systems in Industrial Engineering (3). Application of artificial intelligence and expert systems as engineering tools. Exploring the use of PCs and symbolic machine with various AI/Expert Systems software. Several projects are required. Prerequisites: CAP 5680.

EIN 6606 Robotic Systems (3). Basic robotic system principles, functional requirements of robotic systems, simulation of system preliminary design, and physical experimentation of robotic systems.

EIN 6908 Independent Study (1-3). Individual supervised study by a fac-

ulty. A study plan and a final report are work required. Prerequisite: Departmental approval. (F,S,SS)

EIN 6932 Graduate Seminar (1). An examination of recent technical findings in selected areas of concern. Emphasis is placed on presentations (oral and written), research activities, readings and discussions among participants. (F,S)

EIN 6936 Design of Industrial Engineering Systems (3). Overview of systems theories. Systems design process including: Problem definition, analysis, generation of alternatives, systems evaluation, selection of preferred system, and implementation. Prerequisites: EIN 6345, ESI 6316, and ESI 6524.

EIN 6971 Master's Thesis (1-3). The students following the thesis option should work on his/her thesis through this course. (F,S,SS)

ESI 5451 Engineering Project Management (3). Role of engineers in project management with emphasis on qualitative and quantitative techniques in planning, organization, supervision, and control of projects from concept design to field installation. Prerequisite: Graduate students with permission of instructor. (S)

ESI 6316 Applications of OR in Manufacturing (3). Overview of OR techniques. Manufacturing system and product selection. Shop loading, resource allocation, production scheduling, job sequencing, and plant layout problems. System performance evaluation. Prerequisite: EIN 3314. (F)

ESI 6524 Applied Industrial Systems Simulation (3). Advanced simulation techniques with a focus on practical systems modeling using several user-oriented simulation languages. Projects involving design of high-performance simulation programs are required. Prerequisite: ESI 3523. (S)

ESI 6546 Network Flow Analysis (3). Deterministic and stochastic network flow analysis; minimal cost flow, shortest route, max-flow, and out-of-kilter algorithms; constrained network analysis; and stochastic queueing networks. Prerequisite: ESI 3314.

Mechanical Engineering

Richard Irey, *Professor and Chairperson*

Yiding Cao, *Assistant Professor*

Genady Cherapanov, *Professor*

M. Ali Ebadian, *Professor*

Gordon Hopkins, *Professor and Dean*

W. Kinzy Jones, *Professor*

Umit Koylu, *Assistant Professor*

Rene Leonard, *Associate Professor*

Cesar Levy, *Professor*

James E. Moore, Jr., *Associate Professor*

Norman Munroe, *Associate Professor*

Mordechai Perl, *Courtesy Professor*

Luis Pujol, *Instructor*

Carmen Schenck, *Counselor Advisor/Instructor*

Richard Schoephoerster, *Associate Professor*

Ibrahim Tansel, *Associate Professor*

Sabri Tosunoglu, *Associate Professor*

Qian (Jane) Wang, *Assistant Professor*

Kuang-Hsi Wu, *Professor*

Tachung Yih, *Associate Professor*

Master of Science in Mechanical Engineering

Tachung Yih, *Graduate Studies Coordinator*

Admission Requirements

The Department of Mechanical Engineering offers both thesis and non-thesis options for the Master's Degree. A student seeking the Master's degree with or without thesis is required to pass a comprehensive oral or written examination.

All work counted for the Master's degree must be completed during the six years immediately following the date of admission.

The program provides a broad education, covering more than one field, followed by in-depth studies of areas of interest.

Admission Requirements

The following is in addition to the University's graduate admission requirements:

1. A student seeking admission into the program must have a bachelor's degree in engineering, physical sciences, computer science or mathematics from an accredited institution, or, in the case of foreign students, from an institution recognized in its own country as preparing students for further study at the graduate level.

2. An applicant must have achieved a "B" average in upper level undergraduate work and/or a combined score of 1000 on the Graduate Record Examination (verbal and quantitative portions).

3. Applicants who have not satisfied the above will be evaluated by the departmental graduate admission committee for probationary or 10% waiver admission.

4. In addition to the above criteria, foreign students whose native language is not English, must take the Test of English as a Foreign Language (TOEFL) and obtain a score of 500 or better.

5. The GPA, GRE and TOEFL scores above are to be considered minimum requirements for admissions. Applicants from science areas other than mechanical engineering will be expected to complete sufficient background material at the undergraduate level prior to unconditional acceptance into the graduate program.

Graduation Requirements

The degree will be conferred when the following conditions have been met:

1. Recommendation of the advisor and faculty of the Department.

2. Certification by the departmental chairperson and the dean of the School that all requirements of the degree being sought have been completed.

3. A GPA of at least 3.0 has been earned for certain courses required by the program.

4. Met the undergraduate deficiencies, if any existed in the student's graduate program, as additional courses toward the degree.

5. Completed a minimum of 36 semester hours of graduate level credit. Not more than six graduate semester hours with a grade of 'B' or higher can be transferred from other accredited institutions, provided that the courses have not been used for another degree; such courses must be approved.

6. Successful defense of an acceptable graduate thesis if included in the program.

7. Students must maintain an overall GPA of 3.0. No grade below "C" will be accepted in a graduate program. In the event that a student is placed on a probationary status, he or she must obtain a directed program from his or her advisor and approved by the Dean prior

to continuing further course work toward the degree. The student must satisfy the directed course of action within the prescribed time limit, otherwise he or she will be academically dismissed.

8. Attended one semester of the ME Graduate Seminar prior to graduation and give at least one presentation in the seminar.

9. Complied with all University policies and regulations.

Thesis Option

A student shall complete a minimum of 30 semester credit hours of course work, a minimum of six semester credit hours of EML 6971, Master Thesis, and one semester of the ME Graduate Seminar.

The course requirements include a minimum of 12 hours of 6000-level course credit and 24 hours at the 5000-6000 in Mechanical Engineering, including thesis hours. Out of the 24 coursework hours a maximum of nine credit hours of courses offered by other departments may be accepted provided that courses have a letter grade of 'B' or better. A maximum of three credit hours of approved independent studies, EML 6908, may also be counted toward the degree. A maximum of six graduate credit hours can be transferred from other accredited institutions provided that the courses have not been used for another degree and have a minimum letter grade of 'B'. Transfer courses must be approved by the committee on graduate studies.

Upon the successful completion of coursework, including thesis, and after the determination by the student's advisor that he or she has completed the objectives of the thesis research, the student must pass a final oral examination which is primarily a defense of the thesis research. The candidate should limit the presentation to 40 minutes, unless told differently by the advisor. The essence of the thesis should be presented in the same manner as that of a technical paper at a conference.

The student must submit the thesis to the examining committee and department chairperson at least ten days prior to the oral examination date. Upon passing the oral examination, and completion of such alterations or additions that are required by the committee, each member of the committee will sign a special front page available in the Department. Hardcover bound

copies should be submitted to the student's advisor and to the Library. The student should consult with the advisor for approval of all course work prior to registration.

Non-Thesis Option

(By petition only)

A student shall complete 36 semester credit hours of technical course work, and one semester of the ME Graduate Seminar.

The course work requirements include a minimum of 12 hours of 6000-level course credit and 24 hours at the 5000-6000 in Mechanical Engineering. Out of the 36 coursework hours a maximum of nine credit hours of courses offered by other departments may be accepted; a maximum of three credit hours of approved independent studies, EML 6908, may also be counted toward the degree. A maximum of six graduate credit hours can be transferred from other accredited institutions provided that the courses have not been used for another degree, courses must have a minimum letter grade of 'B' to transfer. Transfer courses must be approved by the committee on graduate studies.

The candidate is required to pass a comprehensive final examination. This examination is given near the end of the candidate's final semester by a committee composed of at least three faculty members appointed by the Department. A student who fails the examination may not attempt it again until one semester has elapsed or until additional work prescribed by the examining committee is completed. The student may retake the examination only once. The examination will test the student's general ability in his or her areas of study as determined by the student's supervisory committee.

Areas of Specialization

Air Conditioning and Refrigeration
Applied Mechanics
Bioengineering/Biomechanics
Computer Aided Engineering Design
Electronic Packaging
Energy Systems
Environmental and Waste Management
Finite Element Analysis
Fluid Mechanics
Heat Transfer
Manufacturing
Material Science

Robotics
Thermal Sciences
Tribology

Course Requirements

All MSME degree seeking students must take the following three courses or equivalent and one seminar as common core courses:

EGM 5315	Intermediate Analysis of Mechanical Systems	3
EGM 5346	Computational Engineering Analysis	3
EML 6935	Graduate Seminar	1

Select one of the following two courses with advisor approval:

EGM 5354	Finite Element Method Application in Mechanical Engineering	3
EGM 6422	Advanced Analysis of Mechanical Systems	3

An additional six credit hours of core courses must be taken depending on the area of interest.

Thermo/Fluid/Biomedical Area:

EML 5709	Intermediate Fluid Mechanics	3
EML 6725	Computational Fluid Dynamics	3

Mechanics/Materials Area:

EGM 5615	Synthesis of Engineering Mechanics	3
EGM 6570	Fracture Mechanics	3

Design and Manufacturing Area:

EML 5530	Intermediate CAD/CAE	3
EML 5385	Identification Techniques of Mechanical Systems	3

An additional 15 credit hours are to be taken from the following Mechanical Engineering courses. (Up to a maximum of nine semester hours may be taken from courses offered by other departments).

EGM 5354	Finite Element Method Application in Mechanical Engineering	3
EGM 5615	Synthesis of Engineering Mechanics	3
EGM 6422	Advanced Analysis of Mechanical Systems	3
EGM 6570	Fracture Mechanics	3
EGM 6586	Fluid Mechanics Applications in Physiological Systems	3

EGM 6587	Applied Biomedical and Diagnostic Measurements	3
EGM 6588	Solid Mechanics Applications in Physiological Systems	3
EMA 5295	Principles of Composite Materials	3
EMA 5507C	Analytical Techniques of Material Sciences	3
EMA 5935	Advanced Topics in Materials Engineering	3
EMA 6127C	Advanced Physical and Mechanical Metallurgy	3
EMA 6165C	Polymer Physics and Analytical Techniques	3
EML 5103	Intermediate Thermodynamics	3
EML 5104	Classical Thermodynamics	3
EML 5125	Classical Dynamics	3
EML 5152	Intermediate Heat Transfer	3
EML 5385	Identification Techniques of Mechanical Systems	3
EML 5509	Mechanical Design Optimization	3
EML 5519	Fault-Tolerant System Design	3
EML 5530	Intermediate CAD/CAE	3
EML 5562	Advanced Electronic Packaging	3
EML 5606C	Advanced Refrigeration and Air Conditioning Systems	3
EML 5615C	Computer Aided Design in Air Conditioning Systems	3
EML 5708	Advanced Design of Thermal and Fluid Systems	3
EML 5709	Intermediate Fluid Mechanics	3
EML 5808	Control Technology for Robots	3
EML 5825	Sensors and Applied Machine Intelligence	3
EML 6153C	Advanced Heat Transfer	3
EML 6154	Conduction Heat Transfer	3
EML 6155	Convection Heat Transfer	3
EML 6157	Advanced Radiation Heat Transfer	3
EML 6223	Advanced Mechanical Vibrations Analysis	3
EML 6233	Fatigue and Failure Analysis	3

EML 6532	Advanced CAD/CAE	3
EML 6712C	Advanced Fluid Mechanics	3
EML 6714	Advanced Gas Dynamics	3
EML 6725	Computational Fluid Dynamics	3
EML 6805	Advanced Design of Robots	3
EML 6908	Independent Studies	3

Doctor of Philosophy in Mechanical Engineering

Admission Requirements

The requirements for admission to the doctoral program in Mechanical Engineering for applicants having a Bachelor's degree in Mechanical Engineering from an accredited institution are the following:

- GPA of at least 3.0/4.0 in the last 60 credit hours attempted
- GRE verbal plus quantitative of at least 1000 points
- Three letters of recommendation in the forms provided by the department
- TOEFL score of at least 500 points for non-English speaking natives

Applicants having a Master's degree in Mechanical Engineering from an accredited institution must also satisfy the above requirements for admissions to the doctoral program; however a GPA of at least 3.3/4.0 in the Master's program is required.

Credentials of all other applicants will be examined by the Graduate Admission Committee on a case by case basis.

In addition to the departmental requirements, all students must satisfy the University's Graduate Policies and Procedures.

Identification of Research Area

Within 15 months upon acceptance into the Ph.D. program, the student has to identify an area of research of his or her interest by contacting and being accepted by a professor willing to guide the dissertation research. If no professor is obtained, the student will be dismissed from the Ph.D. program. Contact the department for a list of the graduate faculty members and their research interests.

Course requirement:

Applicants having a Bachelor's Degree in Mechanical Engineering are required to complete at least 90 credit hours, of which at least 66 hours must be coursework and 24 hours dissertation. The credit hours earned towards the Ph.D. program have the following requirements:

- At least 18 credits 5000 level
- At least 21 credits 6000 level or higher, not to include dissertation
- Minimum 9 semester credits in Mathematics
- Maximum 18 credits outside the areas of Mathematics and Mechanical Engineering with advisor's approval.
- Minimum 24 credit of dissertation

A maximum of 6 semester hours of graduate credit earned from another accredited institution in a non-degree-seeking status may be transferred as long as the courses were completed within the six years preceding admission to the program.

Applicants having a Master's Degree in Mechanical Engineering from an accredited institution may transfer a maximum of 36 semester hours. Course requirements completed at this university shall include at least 30 credit hours earned in academic courses which are part of the doctoral program, and a minimum of 24 credits of dissertation.

Core Courses

Mathematics: 9 credit hours selected from the following list:

MAA 4402	Complex Variables ¹
MAS 5145	Applied Linear Algebra
STA 5206	Design of Experiments ¹
MAD 5405	Numerical Methods
STA 5126	Fundamentals of Design of Experiments
MAP 4401	Adv. Differential Equations ¹
STA 5236	Regression Analysis
MAP 5236	Math. Tech. of Oper. Research
STA 5676	Reliability Engineering
MAP 5407	Methods of Applied Analysis
STA 5800	Stochastic Proc for Engineers
STA 5505	Nonparametric Methods
STA 6166	Statistical Methods in Research I
STA 6167	Statistical Methods in Research II
STA 6176	Biostatistics

STA 6246	Data Analysis I
STA 6247	Data Analysis II
STA 6326	Mathematical Statistics I
STA 6327	Mathematical Statistics II
STA 7707	Multivariate Methods I
STA 7708	Multivariate Methods II

¹These are the only two undergraduate courses that are allowed. These two courses are in the process of being upgraded to graduate level courses by the Math department.

Engineering: 18 credit hours as listed below:

EGM 5315	Intermediate Analysis of Mechanical Systems
EGM 5615	Synthesis of Engineering Mechanics
EGM 6422	Adv. Analysis of Mechanical Systems
EMA 5935	Adv. Topics in Materials Engineering
EML 5530	Intermediate CAD/CAE
EML 5709	Intermediate Fluid Mechanics

Dissertation: 24 credits

Electives Courses: An additional 39 credit hours available to students admitted directly based on a Bachelors degree. Possible elective courses from the Mechanical Engineering department include:

Thermo/Fluid

EGM 6586	Fluid Mechanics Application in Physiological Systems
EGM 6587	Applied Biomedical & Diagnostic Measurements
EGM 6588	Solid Mechanics Applications in Physiological Systems
EML 5103	Intermediate Thermodynamics
EML 5104	Classical Thermodynamics
EML 5152	Intermediate Heat Transfer
EML 5606C	Advanced Refrigeration & A/C Systems
EML 5615C	Computer Aided Design in A/C
EML 5708	Advanced Design of Thermal and Fluid Sys
EML 6153C	Advanced Heat Transfer

- EML 6154 Conduction Heat Transfer
- EML 6155 Convection Heat Transfer
- EML 6157 Advanced Radiation Heat Transfer
- EML 6712C Advanced Fluid Mechanics
- EML 6714 Advanced Gas Dynamics
- EML 6725 Computational Fluid Dynamics

Mechanics/Materials

- EGM 5346 Computational Engineering Analysis
- EGM 5354 Finite Element Method Appl in ME
- EGM 6570 Fracture Mechanics
- EMA 5295 Principles of Composite Materials
- EMA 5507C Analytical Techn. of Materials in Engineering
- EMA 5935 Advanced Topics in Mechanical Engineering
- EMA 6127C Advanced Physical & Mechanical Metallurgy
- EMA 6165C Polymer Physics & Analytical Techniques
- EML 5509 Mechanical Design Optimization
- EML 5125 Classical Dynamics
- EML 5385 Identification Techniques of Mech. Sys
- EML 5562 Advanced Electronic Packaging
- EML 6233 Fatigue and Failure Analysis
- EML 6805 Advanced Design of Robots

Design and Manufacturing

- EML 5385 Identification Techniques of Mechanical Systems
- EML 5509 Mechanical Design Optimization
- EML 5562 Advanced Electronic Packaging
- EML 5808 Control Technology for Robots
- EML 5825 Sensors and Applied Machine Intelligence
- EML 6223 Advanced Mechanical Vibration Analysis
- EML 6532 Advanced CAD/CAE
- EML 6805 Advanced Design of Robots

Residency Requirements

The Ph.D. student must spend at least one academic year in full-time residency. To satisfy the residency requirement for a Ph.D. M.E degree, the candidate must complete a minimum of 18 credit hours within a period of 12 months in residency at the University.

Graduate Supervisory and Research Committee

The student's Ph.D. Graduate Supervisory and Research Committee should be appointed as soon as possible and not later than 15 months after being admitted to the Ph.D. program. Consult the Graduate Guidelines in the Department for more details on how to select the committee members.

Ph.D. Course Breadth Requirements

Breadth criteria could be satisfied for students admitted prior to Spring 1996 by taking 2 courses in 1 field/area outside the student's own field. For students admitted after Spring 1996, by taking 3 courses in field/area outside student's own field.

Examinations and Proposal and Final Defense

Student must demonstrate graduate knowledge acquisition in four incremental stages in order to be awarded a Ph.D. in Mechanical Engineering.

Stage I -Qualifying Exam (QE)

Stage II -Proposal Defense (Graduate Seminar)

Stage III Comprehensive Exam (CE)

Stage IV -Final Defense

In the semester prior to his/her taking the QE or CE, student must declare intention to take QE or CE and must declare a major field or area of research.

I. Qualifying Exam (QE)

General written exam to test masters level knowledge.

A student who is admitted to the Ph.D. program with a bachelors degree must take the QE no later than the beginning of the 3rd year since admission, and a student who enters the Ph.D. program with a masters degree must take the QE no later than the beginning of the 2nd year since admission, and must pass Qualifying Exam by the first semester of the second year. Students may petition for exceptions to the graduate student committee. Stu-

dent who fails may retake the exam one time only.

II. Proposal Defense (PD)

Proposal Defense will be presented by the student in the form of a Graduate Seminar in which he or she must submit a proposal for his/her dissertation.

Students must declare their proposal subject after taking the Qualifying Exam but before taking the Comprehensive Exam.

III. Comprehensive Exam (CE)

The objective of the CE is to test acquisition of Ph.D. level knowledge in major field of research. Examination will be developed by student's dissertation committee to cover core areas. It must be taken before the end of the 2nd semester of the Year 3.

IV. Final Defense (FD)

There will be a public defense at a graduate seminar. The student can fail defense at most, twice.

Final Defense should be presented no later than 4th year after masters degree and no later than 6th year after bachelors degree.

Following the successful defense of the dissertation, as determined by a majority vote of the student's research committee, the dissertation must be forwarded to the Dean of the College of Engineering and Design and the Dean of Graduate Studies for their approval.

All dissertations submitted in fulfillment of requirements for graduate degrees must conform to University guidelines (see "Regulations for Theses and Dissertation Preparation"). One final, approved copy of the dissertation must be delivered to the Chairperson of the Department of Mechanical Engineering. Library copies must conform to University guidelines, also published in "Regulations for Thesis and Dissertation Preparation."

Financial Aid

Consult the Department for information on research and teaching assistantships available for doctoral students.

Course Descriptions

Definition of Prefixes

EGM - Engineering Mechanics; EGN - Engineering General; EMA - Engineering Materials; EML - Engineering Mechanical

EAS 5124 Aerodynamics and Flight Mechanics (3). Fundamentals of Aerodynamics, definition of aerodynamic shapes, analysis of aerodynamic forces, airplane performance, and flight stability and control. Prerequisites: EGN 3321, EML 3126, EGN 3343.

EAS 6185 Turbulence (3). Fundamentals of turbulent flow, solutions for bounded and free turbulent flows, dynamics of turbulence, statistical description of turbulence, spectral dynamics, and stability.

EGM 5315 Intermediate Analysis of Mechanical Systems (3). First course at the graduate level in the analysis of mechanical systems. Modeling of the system and analytical and numerical methods of solution of the governing equations will be studied. Fluid and thermodynamic systems will be emphasized in this course. Prerequisite: EGM 3311 or permission of instructor.

EGM 5346 Computational Engineering Analysis (3). Application of computational methods to mechanical engineering problems of translational, rotational, control, thermal and fluid systems employing linear/nonlinear system elements. Prerequisites: CGS 3420 or equivalent, MAP 3302, EML 3222, EML 3126, EML 4140, or permission of instructor.

EGM 5354 Finite Element Method Application in Mechanical Engineering (3). Utilize the finite element method to solve problems in heat transfer, fluid dynamics, diffusion, acoustics, vibration, and electromagnetism, as well as the coupled interaction of these phenomena. Prerequisites: CGS 3420, EMA 3702, and EML 4140.

EGM 5585 Biotransport Processes (3). Transport of fluid, heat, and mass in the human body. Application to dialyzers and heart-lung devices. Prerequisites: EML 3126, EML 3126L, and EML 4140.

EGM 5615 Synthesis of Engineering Mechanics (3). Unified approach to the analysis of continuous media using constitutive equations, mechanical behavior of materials and their usefulness in handling failure theories and composite materials. Prerequisites: MAP 3302 and EMA 3702.

EGM 5935 Review of Topics in Mechanical Engineering (4). To prepare qualified candidates to take Mechanical Engineering PE written examination. Reviewed courses include Thermodynamics, Fluid Mechanics, Mechanics of Materials, Mechanical Design and Heat Transfer.

EGM 6355 Nonlinear Finite Element Analysis (3). Nonlinear finite element analysis. Geometric and material nonlinearities will be considered in the formulation of different finite elements. Prerequisite: permission of instructor.

EGM 6422 Advanced Analysis of Mechanical Systems (3). Modeling of vibrational and dynamic systems including solution of governing equations by analytical and numerical techniques. Prerequisite: EGM 5315 or permission of instructor.

EGM 6455 Impact Dynamics (3). Mechanical impact; point-mass collisions, vibratory impact, stress waves in solids, elastic-plastic stress waves, low velocity impact, penetration and perforation applications. Prerequisites: EGN 3321, PHY 3048, and EMA 3702.

EGM 6570 Fracture Mechanics (3). Griffith's and Irwin's fracture criteria; stress intensity factors evaluation; crack-tip plastic zone; fracture toughness measurement; crack initiation; fatigue crack growth; stress corrosion cracking. Prerequisite: EGM 5615.

EGM 6586 Fluid Mechanics Application in Physiological Systems (3). Fluid mechanics principles including finite element and finite difference methods as it is applied to the analysis of various physiological systems will be covered. Process flow, diffusion and transport will be discussed in cardiovascular and pulmonary systems. Application of these primarily in the design of heart-lung machines, dialysis units, and heart valves will be discussed. Prerequisite: EGM 4580 or permission of instructor.

EGM 6587 Applied Biomedical and Diagnostic Measurements (3). Fundamentals of biomedical measurements and the design of biomeasurement systems and devices. This includes transducers and electrodes, EMG, EEG, ECG and medical imaging techniques, and electrical safety. Prerequisite: EGM 4580 or permission of instructor.

EGM 6588 Solid Mechanics Application in Physiological Systems (3). Solid mechanics and numerical methods as applied to rheology analysis of the musculoskeletal system and trauma. Design application in orthotics and prosthesis and heart valves. Prerequisite: EGM 4580 or permission of instructor.

EGM 6589 Advanced Biofluid Mechanics (3). Applications of fluid mechanics principles to human circulatory systems. Unsteady blood flow and wave propagation in elastic tubes. Influence of fluid dynamics on thrombosis and atherosclerosis. Prerequisite: EGM 6586.

EGM 6593 Advanced Cardiac Mechanics (3). Applications of principles of solid mechanics to the human cardiovascular system. 3-D reconstruction of the left ventricle, contractile properties and stress distribution in the myocardium. Prerequisite: EGM 6588.

EGM 6654 Advanced Theory of Elasticity (3). Modern methods of stress and strain analysis including two-dimensional problems of stress concentration, contact adhesion, friction, thermal stresses, and dynamic waves. Prerequisites: EGM 5615, EGM 5315, or permission of instructor.

EGM 7456 Advanced Impact Dynamics (3). High velocity impact mechanics, hyper velocity impact mechanics, penetration mechanics, long rod and plate penetration mechanics, dynamic fracture, kinetic energy penetration, analytical modeling. Prerequisite: EML 6455 and permission of instructor.

EGM 7574 Advanced Fracture Mechanics (3). Modern fracture mechanics including invariant integrals, nanoscale fracture, environmental fracture, penetration mechanics, failure waves, erosion, and fracture by electron and laser beams. Prerequisites: EGM 6570, EGM 6422.

EGM 7575 Cutting Mechanics (3). Study of cutting stress, impact stress, stress and strain waves, tensile failure, shear-tension couples, responses in cutter and material, mechanics in body, fiber and molecular structures. Prerequisites: EML 6455 and permission of instructor.

EGM 7676 Classic Topics of Nonlinear Mechanics (3). Classic topics on nonlinear mechanics, such as Theory of Plasticity of Solids, and the

Theory of Jets and Cavities of Fluids. Prerequisites: EGM 5315, EGM 6422, EGM 5615, EML 5709.

EGN 5367 Industrial Materials and Engineering Design (3). Industrial materials, material selection, and engineering design process, including synthesis, analysis, optimization, and evaluation.

EMA 5295 Principles of Composite Materials (3). The mechanical behavior of composite materials used in the automotive, aircraft and sporting goods industries, material and laminar properties; design of composites; failure analysis; and environmental effects. Prerequisite: EGM 5615 or permission of instructor.

EMA 5507C Analytical Techniques of Materials Sciences (3). Fundamental theories and techniques of the analytical methods for materials including: X-ray diffraction, scanning and transmission electron microscopy, thermal and surface analysis, and vacuum systems. Prerequisite: EGN 3365.

EMA 5584 Biomaterials Science (3). Materials used in prostheses for skin and soft tissue, vascular implant devices, bone repair, and artificial joints. Structure-property relationships for biological tissue. Prerequisites: EGN 3365, EMA 3702.

EMA 5935 Advanced Topics in Materials Engineering (3). Topics include thermodynamics of solids, principles of physical metallurgy, including phase transformation and diffusion and analytical methods in materials engineering. Prerequisite: EGN 3365.

EMA 6126 Advanced Physical Metallurgy (3). Energetics of phase transformation and spinodal decomposition, homogeneous and heterogeneous nucleation in solid state reactions, and martensite transformations. Prerequisites: EMA 4121 or permission of instructor.

EMA 6127C Advanced Physical and Mechanical Metallurgy (3). Advanced topics in physical and mechanical metallurgy including statics and dynamics of dislocations, plastic deformation of fracture, creep solidification, phase transformation, and heat treatment. Prerequisite: EGN 3365 or permission of instructor.

EMA 6165C Polymer Physics and Analytical Techniques (3). Topics in polymers and the analytical techniques, including: synthesis, characterization, state of polymers, plasma processes, X-ray diffraction, scan-

ning and transmission electron microscopy. Prerequisite: EGN 3365 or permission of instructor.

EMA 6185 Advanced Mechanics of Composite Materials (3). Study of micromechanics and mechanical processes in microscale, including fracture, reinforcement and delamination. Prerequisite: EMA 5295.

EMC 5415 Digital Control of Mechanical Systems (3). Discrete modeling of mechanical systems. Digital feedback systems. Computer interface of mechanical systems. Controller design with emphasis on hydraulic, pneumatic and electro-mechanical devices. Prerequisite: Permission of instructor.

EML 5103 Intermediate Thermodynamics (3). Thermodynamic approach to processes and engines; alternative formulations and Legendre transformations; Maxwell relations, first and second order phase transitions. Prerequisites: EML 3101 and EGM 3311.

EML 5104 Classical Thermodynamics (3). Mathematical analysis of the laws of classical reversible and irreversible thermodynamics. Applications to mechanical, electromagnetic, and chemical systems, under ideal and real current interest. Prerequisite: EML 3101.

EML 5125 Classical Dynamics (3). Kinematics of rigid body motion, Eulerian angles, Lagrangian equations of motion, inertia tensor, momental ellipsoid. Rigid-body equations of motion, Euler's equations, force-free motion, Poisson and Herpolhode, theory of tops and gyroscopes. Variational principles. Hamiltonian equations of motion. Poincaré representation. Prerequisites: MAP 3302 and EGN 3321.

EML 5152 Intermediate Heat Transfer (3). Multi-dimensional heat conduction under steady and transient conditions. Heat, mass and momentum transfer. Radiation heat transfer. Gas radiation. Free and forced convection. Prerequisites: EML 4140 and EML 5709.

EML 5385 Identification Techniques of Mechanical Systems (3). FFT, time series analysis and neural networks are introduced. Applications of these techniques are discussed for identification of mechanical structures, and machine diagnostics. Prerequisite: EML 4312.

EML 5509 Mechanical Design Optimization (3). Finite element analysis

and sensitivity analysis combined with numerical optimization techniques to optimize the design. Prerequisite: EML 5354 or permission of instructor.

EML 5505 Smart Machine Design and Development (3). Design of independently operating smart electromechanical systems (most consumer products) which monitor their environment, give decisions, and create motion. Prerequisites: EML 4312 or consent of instructor.

EML 5519 Fault-Tolerant System Design (3). Fault tolerance in mechanical, manufacturing, computer, and aerospace systems. Basic stages of fault isolation. Fault tolerance measures, architectures, and mechanical system design methodologies. Prerequisite: Permission of instructor.

EML 5530 Intermediate CAD/CAE (3). Computer aided geometrical modeling of spatial mechanical systems. Design criteria and analytical approaches for planar kinematic systems will be emphasized. Prerequisites: EML 4535, or permission of instructor.

EML 5562 Advanced Electronic Packaging (3). Advanced topics in electronic packaging. Evaluation of first through fourth level assembly. Applications of computer layout design, thermal management and mechanical stability analysis. Prerequisite: EML 4561 or permission of instructor.

EML 5599 Heat Pipe Theory and Applications (3). Heat pipe theory, heat pipe design and its applications, especially in the areas of energy conversion and conservation. Prerequisite: Permission of instructor.

EML 5606C Advanced Refrigeration and Air Conditioning Systems (3). The various methods used in the thermal design and analysis of both refrigeration and heat pump systems are investigated. Various methods of producing heating and cooling are examined including vapor compression, absorption, air cycle, steam jet, thermoelectric, solar heating and cooling systems.

EML 5615C Computer Aided Design in Air Conditioning (3). Software will be used to demonstrate heating, ventilating and air conditioning design concepts and sizing equipment and determining performance parameters. Project design is required. Prerequisite: EML 4601, EML 4603.

EML 5708 Advanced Design of Thermal and Fluid Systems (3). Advanced designs of pumps, compressors, heat exchangers, HVAC systems and thermal and fluid control devices. Prerequisite: EML 4706.

EML 5709 Intermediate Fluid Mechanics (3). Basic concepts and scope of fluid dynamics; non-inertial reference frames. Two-dimensional potential theory. Applications to airfoils. The Navier-Stokes equations; selected exact and approximate equations. Prerequisite: EML 3126.

EML 5748 Boundary Layer Theory (3). Advanced fluid dynamic analysis of the Navier - Stokes equation using boundary layer assumptions. Focus will be on solutions of thermal and fluid boundary layers. Prerequisite: EML 3126.

EML 5808 Control Technology for Robotic Systems (3). State-space equations of robots. Controller design based on linearization, non-linearity cancellation, optimal control, adaptive control and other methods. Stability analysis, performance comparison. Prerequisites: EGN 3321, EML 4312 or equivalent; or approval of the instructor.

EML 5825 Sensors and Applied Machine Intelligence (3). Sensors, signal analysis techniques, and error compensation methods will be introduced for machine intelligence. Prerequisites: EML 4312, Production Machine Modeling and Design, or equivalent, or permission of instructor.

EML 6153C Advanced Heat Transfer (3). Review of analogies among heat, mass and momentum transfer. Free and forced convection from theoretical and experimental viewpoint for laminar and turbulent flows. Film and dropwise condensation. Prerequisite: EML 5152.

EML 6154 Conduction Heat Transfer (3). Heat transfer by conduction for steady and unsteady one and multi-dimensional systems with and without heat generation. Temperature distribution analysis using analytical and computational methods. Prerequisite: EML 4140.

EML 6155 Convection Heat Transfer (3). Development and solution of governing equations of parallel flows, boundary layer flows, instability and turbulence with convective heat transfer. Prerequisite: EML 4140.

EML 6157 Advanced Radiation Heat Transfer (3). Heat transfer by radiation for steady and unsteady one and multi-dimensional systems. Radiation parameters effecting different systems will be studied, analytically or numerically. Prerequisite: EML 4140.

EML 6223 Advanced Mechanical Vibration Analysis (3). Multidegree of freedom systems, discrete and continuous systems; vibration control and introduction to vibration of nonlinear systems. Prerequisite: EML 4220.

EML 6233 Fatigue and Failure Analysis (3). A study of the theoretical and practical aspects of material failure including failure modes, life prediction, corrosion with the goal of designing a safe product. Prerequisite: EGM 5615.

EML 6245 Advanced Tribology (3). Analyses of friction, wear, and flash temperature. Theories of elastohydrodynamic and mixed lubrications. Tribology of advanced materials. Prerequisites: EML 4246 or permission of instructor.

EML 6518 Advanced Modeling in Mechanical Engineering (3). Basic principles of mathematical modeling following a variety of problems in mechanical engineering. Prerequisites: EGM 6422 and EGM 5615.

EML 6532 Advanced Computer Aided Design/Computer Aided Engineering (3). Advanced CAD techniques in design of mechanical systems. Architecture of CAD systems including database applications. Advanced computational geometry student programming. Prerequisites: EML 5530.

EML 6574 Advanced Mechanical Design Optimization (3). Advanced topics in numerical optimization, sensitivity analysis, approximation techniques and shape optimization. Prerequisite: EML 5509.

EML 6712C Advanced Fluid Mechanics I (3). Turbulent flows with emphasis on engineering methods. Momentum, energy, and species transfer. Production, dissipation, and scaling laws for turbulence. Mixing length, effective viscosity. Prerequisite: EML 5709.

EML 6714 Advanced Gas Dynamics (3). Thermodynamic and fluid mechanics principles to high speed flows. Flows to be studied include flows with friction and heat loss/addition. Prerequisite: EML 4711.

EML 6725 Computational Fluid Dynamics (3). Basic computational methods for incompressible and compressible flows. Methods for solving the stream function equation. Boundary conditions for vorticity and stream function equations. Finite difference and finite element techniques. Prerequisites: CGS 3420, EML 6712.

EML 6747 Mechanics of Fluid Flow in Porous Materials (3). The mathematical theory of fluid penetration through porous materials and lungs, heat transfer, fluidized beds, non-stationary flows, and double continua. Prerequisite: EML 5709.

EML 6750 Multiphase Suspension Flow (3). Definition of multiphase flow, experimental observation, mathematical modeling of multiphase system, measurement technique, suspension boundary layer flow, and fluidization technique. Prerequisite: Permission of instructor.

EML 6805 Advanced Design of Robots (3). Kinematic analysis of mechanisms and robot arms, geometric configurations, analytical and numerical methods in kinematics. Prerequisite: EML 3222, EML 3262, EML 4501.

EML 6908 Independent Studies (1-3). Individual research studies available for qualified graduate students. The work is to be performed under the supervision of an advisor. A report is to be submitted. Students may register for 1 to 3 credits per semester. Prerequisite: Advisor's permission.

EML 6935 Graduate Seminar (1). Different problems in Mechanical Engineering and results of ongoing research will be presented and discussed by invited experts. The seminar will expose the students to advances in existing and emerging areas of research. Prerequisite: Graduate standing.

EML 6971 Masters Thesis (1-6). Masters thesis in any advanced topic, a report is to be submitted and an oral presentation is to be made. Students may register for one to three credits per semester. Total of six credits to be earned for the Master's Degree. Prerequisite: Advisor's permission.

EML 7728 Mechanics of Vortex and Separated Flows (3). Prediction of drag and lift forces acting upon a body moving in fluid or gas for large reynolds numbers using numerical experiments with vortex and/or

separated flows. Prerequisites: EML 6712, EGM 6422, and EML 6714.

EML 7837 Boundary Value Problems in Engineering (3). Analytical methods and skills for closed-form solutions of boundary value problem of mathematical physics and mechanics for engineering applications based on Riemann theory. Prerequisites: MAP 5407, MAA 4402, or permission of instructor.

EML 7979 Dissertation (3-12). Doctoral research leading to Ph.D. Mechanical engineering dissertation. Prerequisite: permission of advisor.

External Programs

Dr. Irma Becerra-Fernandez,
Director

Mercy Rueda, FEEDS Coordinator

Florida Engineering Education Delivery System (FEEDS) is a statewide system whereby graduate and undergraduate level engineering courses are delivered to industrial sites and cooperating centers via distance learning. Students with work and family responsibilities are offered the flexibility to take courses around their busy schedules. Courses are delivered through one of the following three methods: videotape (asynchronous, traditional FEEDS program); ITFS (synchronous, interactive TV that is one-way video and two-way audio); and videoconferencing (synchronous, interactive TV that is two-way video and two-way audio).

Currently, students can select the necessary courses from FIU via distance learning to obtain a Master's degree in Electrical Engineering, Computer Engineering, Industrial Engineering, Manufacturing Engineering, Construction Management and Engineering Management.

A student taking a course through FEEDS must meet the same requirements as the student on campus and will earn the same credit as if he/she were to attend classes on campus. A student need not be enrolled in a graduate or undergraduate degree program in order to take a course. However, a student who intends to seek admission to a program should be aware that no more than six (6) graduate or fifteen (15) undergraduate credits are allowed to be transferred into a program.

Seminars

Review Seminars for the Professional Engineer and Engineer in Training.

Southern Technology Application Center STAC. The Southern Technology Application Center (STAC) serves nine Southeastern states and is part of a national network of technology transfer resources and expertise. STAC's mission is to help increase U.S. competitiveness and spur economic development in the Southeast through the transfer of critical knowledge. One of the programs STAC operates in the Southeast Regional Technology Transfer Center to help companies acquire and commercialize technology developed by NASA and other federal laboratories. It provides assistance in every phase of technology development and commercialization. STAC's assistance spans from identifying and locating technologies, to analyzing markets, to bringing together experts from government, academic and industry to address complex technical questions. STAC is supported by the State of Florida University System and NASA's Office of Space Access and Technology, Commercial Technology Division.

School of Design

William G. McMinn, *Director*
 Edward T. Baker, *Assistant Professor*
 Nathaniel Belcher, *Assistant Professor*
 Juan A. Bueno, *Associate Professor*
 Claudia Busch, *Assistant Professor*
 Jaime Canaves, *Associate Professor*
 Reid Ewing, *Associate Professor*
 Christopher Fannin, *Assistant Professor*
 Rene Gonzalez, *Assistant Professor*
 Gisela Lopez-Mata, *Associate Professor*
 Iraj E. Majzub, *Professor*
 Camilo Rosales, *Assistant Professor*
 John Stuart, *Assistant Professor*

Master of Architecture

The Master of Architecture Program approved for implementation in Fall 1996, prepares students for research and practice in the field of architecture and environmental design, focusing on architecture of tropical and subtropical Americas; history and theory of architecture; advanced technologies in architectural practice, and design.

The program is comprised of 57 credits minimum after the completion of a bachelor of Design in Architectural Studies or its equivalent. Entry to the program from related disciplines is possible, but requires a close evaluation of the background by the student graduate advisor. A GPA of 3.0, or a GRE of 1000 or better are required for admission to the program. In addition, a portfolio review of previous work is used for selection of the most promising students, since entry to the program is limited.

Program will include: (4 semesters)

Graduate Design Studios	24 credit hours
History/Theory of Architecture	6 credit hours
Technologies (structures, systems, computers)	9 credit hours
Professional Practice	6 credit hours
Directed Electives	12 credit hours

The student has a choice of a thesis or a final graduate design studio.

Master of Landscape Architecture

The Graduate Program in Landscape Architecture prepares students for research and practice while focusing on the management, planning, and design of tropical and subtropical landscapes. The

unique natural and cultural environments of south Florida, tropical America, the Bahamas, and the Antilles provide firsthand experience of a wide range of landscapes; the study, enrichment, and preservation of which are emphasized through relevant course work, field trips, and service activities. The Everglades and Biscayne National Parks, Fairchild Tropical Garden, and Vizcaya Palace and Gardens are among the many regional resources readily available to students enrolled in the Program. The School of Design also offers study and research opportunities in cooperation with institutions in tropical America and mediterranean Europe.

A flexible curriculum accommodates individual research interests within a rigorous academic framework. The School offers two options in the Landscape Architecture Graduate Program. The Professional Degree Option is intended for individuals with an undergraduate degree in a major other than a design discipline, or with a preprofessional undergraduate degree in a planning or design discipline. This course of study leading to the first professional Master of Landscape Architecture degree is accredited by the Landscape Architectural Accreditation Board of the American Society of Landscape Architects. The Post-Professional Degree Option is intended for individuals with an undergraduate degree in landscape architecture, or with a graduate degree in a planning or design discipline who wish to pursue advanced professional study.

Professional Degree Option

Individuals with a Bachelor of Arts or a Bachelor of Science, or equivalent, from an accredited institution are eligible for admission to the Program provided University requirements are met. Three years of full-time study in residence are normally required. However, a part-time study option is available subject to the review of the Program. Satisfactory completion of 84 credits in the following course of study is required.

Landscapes	6
History and theory	6
Methods	6
Management, Planning, and Design	30
Construction	6
Practice	6
Research and specialization	12
Electives	12

Individuals with an undergraduate degree in planning, urban design, or architecture from an accredited professional program, or with a pre-professional undergraduate degree in planning, landscape architecture, urban design, or architecture may be granted advanced standing, not to exceed 24 credits for undergraduate courses with a grade of 3.0 or better on a 4.0 point scale.

Individuals with a graduate degree in planning, urban design, or architecture from an accredited professional program may be granted advanced standing, not to exceed 48 credits for graduate courses with a grade of 3.0 or better on a 4.0 point scale.

Post-Professional Degree Option

Individuals with an undergraduate degree in landscape architecture from an accredited professional program are eligible for admission to the Program. Two years of full-time study in residency are normally required. However, a part-time study option is available subject to the review of the Program. Satisfactory completion of 60 credits in the following course of study is required.

Management, Planning and Design	18
Research and specialization	12
Electives	30

Admission Policies

To be admitted to this program, students must have a bachelor's degree from an accredited institution and a B-average in upper level undergraduate work or a combined score of 1000 or better on the verbal and quantitative GRE; foreign students must demonstrate proficiency in English. While open to undergraduates from many fields, admission is contingent on demonstration of exceptional ability in written and analytical work; applicants should submit exemplary work products along with their applications.

Additional Requirements:

1. A 'B' average in upper level undergraduate work, and an overall 3.0 GPA.

2. A combined score of 1000 on the Graduate Record Examination (GRE); or

3. A graduate degree from an accredited institution.

Grades earned at an institution with non-traditional grading systems will be given every consideration and applicants will be treated

equally with students from institutions with traditional grading systems.

Foreign students are admitted as governed by University Admission rules.

1. Eligible foreign students may be accepted at the appropriate level subject to space and fiscal limitations.

2. In addition to University admission requirements, foreign students must meet the following requirements as a minimum:

a. The applicant shall be academically eligible for further study in his or her own country.

b. The applicant whose native language is other than English shall demonstrate proficiency in the English language by presenting a score of 550 or higher on the Test of English as a Foreign Language (TOEFL).

Degree Requirements

To be eligible for a Master's degree in the area of Environmental and Urban Systems, a student must:

1. Satisfy all University requirements for a Master's degree.

2. Meet any undergraduate deficiencies, the requirements of the core and a track, and complete a specific program of study.

3. Complete a minimum of 36 semester hours of graduate level courses. (Not more than six graduate credit semester hours can be transferred from other accredited institutions).

4. Achieve a 'B' average or higher in all graduate work.

5. Complete an acceptable graduate thesis or graduate project.

Awards and Scholarships

The following scholarships and awards are presented to students fully admitted to the Graduate Program in Landscape Architecture who have demonstrated outstanding achievements in their studies.

American Society of Landscape Architects Awards. On nomination by the Program faculty, the American Society of Landscape Architects awards a Certificate of Honor and a Certificate of Merit to the two students who have demonstrated a high degree of academic scholarship and of accomplishments in skills related to the art and technology of landscape architecture.

Sigma Lambda Alpha Honor Society. Each year, upon nomination by the Program faculty, the Alpha Chi

Chapter of the Sigma Lambda Alpha Honor Society inducts the outstanding students in the Program.

The Ernest and Virginia Makemson Memorial Endowed Scholarship Fund. This fund provides support for students who have demonstrated interest and experience in restoring and preserving Florida's natural and cultural environment through the practice of landscape architecture.

Ownership of Student Work

Student work, submitted to the School in satisfaction of course or degree requirements, becomes the physical property of the School. However, students retain all rights to the intellectual property of such work. This work may include papers, drawings, models, and other materials. The School assumes no responsibility for safeguarding such materials. At its discretion, the School may retain, return, or discard such materials. The School will not normally discard the materials of currently enrolled students without giving the student a chance to reclaim them.

Course Descriptions

Definition of Prefixes

ARC-Architecture; IND-Interior Design; LAA-Landscape Architecture
F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

ARC 5176C Computer Practices in Design II (3). Advanced study in concepts, issues and methods in computer-aided architectural design. Application of ARC 5175. Prerequisite: ARC 5175 or equivalent. (SS)

ARC 5 Legal Aspects of Design Practice (3). Special obligations and privileges of a design professional, common contract forms, issues of liability, copyright, insurance's and general organization and supervision. Ethics and legal responsibilities.

ARC 5 Special Topics in Architecture (1-3). Course to address current special topics of interest. Developed in cooperation with private or public sector, building industry or professional associations.

ARC 5 Building Systems (3). Conceptual framework for design of building assemblies, understanding of construction technologies and properties of building materials. Building systems and pre engineered components are presented and analyzed.

ARC 5 Graduate Design 1 (6). Large scale architectural projects to develop in the design context of historical, social, economic, climatic, and environmental constraints of tropical/subtropical America.

ARC 5 Graduate Design 2 (6). Architectural projects dealing with housing and rehabilitation of housing in the setting of an organized community, within or outside of the urban environment. Study plans for long range development.

ARC 5 Architectural History of the Americas (3). Historical analysis of the development of built forms and styles in tropical and subtropical Americas, investigating its sociopolitical and artistic context.

ARC 5 Site Development in Architecture (3). Issues, controls and methods pertinent to the physiographic, topographical, and cultural determinants of site design in architecture.

ARC 5 Environmental Systems in Architecture (3). Development of an understanding of environmentally sensitive design. Climate and region as a major determinant of building design; sustainability, energy conservation, passive solar design, daylight and natural ventilation will be examined.

ARC 5 Alternative Studio (6). Topical studies in architecture, on issues of current interest, with the participation of visiting lecturers, or abroad. (SS)

ARC 5916 Innovations in Building Technology (3). Experimental approach to new materials and methods applicable to the field of construction. Prerequisite: Permission of instructor. (SS)

ARC 6 Graduate Seminar (1-3). Topical seminar designed especially for direction by visiting professionals or visiting faculty from other disciplines.

ARC 6 Research Methods in Architecture (3). Advanced research methodology in design fields focusing on data acquisition, analysis and interpretation. Presentation formats, statistical analysis, and hands-on experience.

ARC 6 Independent Study (1-6). Independent study to students to pursue a specialized area of study under individual faculty supervision. Areas of inquiry will depend upon the agreement made between the faculty member and student.

ARC 6 Graduate Design 3 (6). Architectural project emphasizing design development preparation of details and design documents for buildings of intermediate complexity.

ARC 6 Graduate Design 4 (6). Development of architectural projects initiated by students, on an existing or proposed site, integrating full spectrum of the design process.

ARC 6 Thesis (6). Supervised graduate research and writing of a thesis on an architectural topic to be chosen by student with the approval of a graduate committee.

LAA 5233 Theory of Planting Design (3). Study of principles and methods related to the ecological, functional, and aesthetic use of vegetation in landscape architecture. Prerequisite: Program approval.

LAA 5235 Theory of Landscape Architecture (3). Critical review of the environmental parameters, morphological concepts and ideological principles that generate form and meaning in landscape architecture. Prerequisite: Program approval. (S)

LAA 5243 Regional Landscape Issues (3). Exploration of the landscape as cultural construct of social, economic, and scientific values relevant to regional issues of land use and management. Prerequisite: Program approval.

LAA 5335 Landscape Development (3). Technical aspects of the design of earthwork; and of the specification of materials, products, and methods of installation used in landscape development. Prerequisite: LAA 5653. (F)

LAA 5371 Computer Practices in Landscape Architecture (3). Computer applications of graphics, modeling, and animation techniques used in landscape architecture. Prerequisites: LAA 5653. (SS)

LAA 5424 Landscape Construction (3). Technical aspects of the design of sitework and of the specification of materials, products, and methods of installation used in landscape construction. Prerequisite: LAA 5335. (S)

LAA 5425 Landscape Construction Documentation (3). Production of landscape construction documents, including drawings and project manual with bidding documents, contract documents and technical specifications on the computer. Prerequisite: LAA 5371 and LAA 5424. (F)

LAA 5521 Tropical Landscapes (3). Study of the structure, function, and change in the natural and cultural landscapes of tropical and subtropical regions. Prerequisite: Program approval. (F)

LAA 5540 Landscape Horticulture (3). Overview of horticultural management practices related to the growth, transport, installation, and maintenance of vegetative materials used in landscape architecture. Prerequisite: Program approval.

LAA 5652 Formative Studio (6). Introduction to concept development, spatial expression, and representational techniques in landscape architecture. Prerequisite: Program approval. (F)

LAA 5653 Site Studio (6). Application of landscape architecture principles and methods to site design in tropical and subtropical contexts. Prerequisite: LAA 5652. (S)

LAA 5715 History and Theory of Architecture (3). Overview of the history and theory of architecture and urban design from antiquity to the present. Prerequisite: Program approval. (SS)

LAA 5716 History of Landscape Architecture (3). Historical survey of the principal sites and traditions manifested in the evolution of landscape architecture and urban design from antiquity to the present. Prerequisite: Program approval. (F)

LAA 6215 Professional Practice in Landscape Architecture (3). Study of the ethical, legal, financial, and managerial aspects of professional practice in landscape architecture. Prerequisite: LAA 5424. (S)

LAA 6222 Communications in Landscape Architecture (3). Methods of verbal and graphic presentations, workshops, and publications used in landscape architecture. Prerequisite: Program approval. (SS)

LAA 6245 Theory of Urban Design (3). Critical review of the principal theories of urbanism that have influenced the fabric and image of the city in Western history. Prerequisite: LAA 5235 and LAA 5716. (SS)

LAA 6246 Typology of Landscape Architecture (3). Critical examination of the origin, development and transformation of form and meaning in modern and post modern landscape architecture and urban design. Prerequisite: LAA 5235 and LAA 5716. (SS)

LAA 6247 Modern Landscape Architecture (3). Critical review of the origins and development of modern and post modern expressions in landscape architecture. Prerequisites: LAA 5235 and LAA 5716.

LAA 6342 Landscape Aesthetics (3). Critical review of the assessment models used to evaluate the aesthetic quality of the landscape. Prerequisites: LAA 5235 and LAA 5716. (SS)

LAA 6373 Sound in Landscape Architecture (3). An examination of the ecological, acoustic, aesthetic, and historical aspects of the sonic environment. Prerequisites: LAA 5235 and LAA 5716.

LAA 6382 Methods of Environmental Analysis (3). Theories and methods of the organization, analysis, and interpretation of cartographic data using digital geographic information systems. Prerequisites: LAA 5521. (SS)

LAA 6541 South Florida Landscapes (3). Study of the structure, function, and change in the natural and cultural landscapes of tropical and subtropical Florida. Prerequisite: LAA 5521. (S)

LAA 6551 Sustainable Landscapes (3). Study of the principles that sustain a balance between natural resources and human aspirations in the landscapes of tropical and subtropical regions. Prerequisite: LAA 6541. (SS)

LAA 6654 Community Studio (6). Application of landscape architecture principles and methods to community planning and design in tropical and subtropical contexts. Prerequisite: LAA 5653. (F)

LAA 6655 Regional Studio (6). Application of landscape architecture principles and methods to regional management, planning, and design in tropical and subtropical contexts. Prerequisite: LAA 6654. (S)

LAA 6745 Preservation of Landscape Architecture (3). Critical examination of the formation and preservation of historic sites with emphasis on interpretation, analysis and evaluation of cultural landscapes and urban places. Prerequisite: LAA 5235 and LAA 5716. (SS)

LAA 6835 Urban Studio (6). Application of interdisciplinary principles and methods to urban planning and design in tropical and subtropical contexts. Prerequisite: LAA 6655. (F)

LAA 6905 Independent Study (1-3).

Work under the direction of faculty on a particular aspect of landscape architecture. Prerequisite: LAA 6916. (F,S)

LAA 6915 Supervised Research (1-5).

Work under the supervision of faculty in preparation for a master's thesis or a master's project in landscape architecture. Prerequisite: LAA 6916. (F,S)

LAA 6916 Research Methods (3).

Methods of information search, data interpretation, and hypothesis formulation used in landscape architecture research. Prerequisite: Program approval. (F)

LAA 6935 Graduate Seminars (1-3).

Course to address topical issues in landscape architecture. Prerequisite: Program approval. (F,S,SS)

LAA 6936 Special Topics (1-3).

Course to address topics not yet offered in the landscape architecture curriculum. Prerequisite: Program approval. (F,S,SS)

LAA 6970 Master's Project (6).

Completion of project by candidate for the degree of Master of Landscape Architecture. Prerequisite: LAA 6915.

LAA 6971 Master's Thesis (6).

Completion of thesis by candidate for the degree of Master of Landscape Architecture. Prerequisites: LAA 6915. (S)

URP 5312 Urban Land Use Planning

(3). Elements of the general land use plan, location and space requirements; the use of models in planning; development of the land use plan; policy plan, implementation. Prerequisite: Consent of advisor.

URP 5316 Environmental and Urban

Systems (3). Overview of basic issues and principles of environmental and urban planning/design systems. Emphasis will be placed on multi-disciplinary linkages.

URP 5912 Research Methods (3).

Methods of information search, data interpretation, and hypotheses formulation used in the field.

URP 6222 Urban Regional Analysis

(3). The urban areas as a complex system; modeling the urban growth processes; statistical decision making games; modeling and simulation; cost effectiveness; application of the theory; a system-wide view of the Miami area. Prerequisite: Consent of instructor.

URP 6317 Advanced Environmental and Urban Systems (3). To study the application of physical planning and design concepts and their environmental, infrastructural and social impacts.

URP 6906 Independent Study (1-3).

Specialized individual studies in Environmental and Urban Systems, under supervision of faculty. Prerequisite: Faculty member approval.

URP 6935 Special Topics (3). Intensive treatment of specific subjects in the field of environmental and urban systems. Topics will vary depending upon the interest of students and faculty.

URP 6937 Final Project (3). Individual work culminating towards professional practice that also meets a degree requirement of the Master of Environmental and Urban Systems program. Prerequisite: Permission of graduate advisor.

URP 6975 Thesis (6). Individual research culminating towards professional practice that also meets a degree requirement of the Master of Environmental and Urban Systems program. Prerequisite: Permission of graduate advisor.

Construction Management

Jose D. Mitrani, P.E., *Associate Professor and Chairperson*
 Irishad Ahmad, *Associate Professor*
 Kenneth H. Carpenter, *Associate Professor*
 Bhaskar Chaudhari, P.E., *Professor*
 John M. Dye, *Instructor*
 Eugene D. Farmer, A.I.A., *Associate Professor*
 Julio Olazo, *Assistant Professor*

Master of Science in Construction Management

The masters degree is rapidly becoming the entry level requirement for middle and upper level managerial positions in the construction industry. The primary goal of this program is to provide the knowledge and advanced skills essential for success in these positions. The program is flexible enough to accommodate graduates from other disciplines who may lack a part of the undergraduate background in construction management.

Students who hold four year undergraduate degrees in construction management or its equivalent in related fields may normally complete the masters degree in one academic year as full-time students. Equivalent in related fields should include studies in construction drawings, construction materials and methods, construction accounting and finance, economic planning, structures, sitework, legal aspects of construction, cost estimating, construction scheduling and business management/finance. Students with deficiencies in these fields may need longer residence for the masters degree, as they will be required to take specified basic courses to provide a foundation for advanced courses.

Admission Application

Each student wishing to enter the graduate program must formally apply to the University for acceptance. See catalog for graduate application instructions.

Admission Requirements

In order to be admitted, applicants should hold a Bachelor's Degree in Construction, Construction Management, Architecture, Engineering, Business or equivalent related fields. In addition, applicants must meet one of the two following criteria:

1. Must have earned a minimum grade point average (GPA.) of 3.0 in the last 60 credit hours of coursework related to their undergraduate degree, as computed by the Office of Admissions, or,

2. Must have obtained a score of at least 1000 on the Graduate Record Examination (GRE) or a minimum score of 500 on the Graduate Management Admissions Test (GMAT), and have earned a minimum grade point average of 2.0 in the last 60 credit hours of coursework related to their undergraduate degree, as computed by the Office of Admissions.

GRE or GMAT

All graduate students, regardless of undergraduate GPA., are required by the University to take the GRE or the GMAT. Students that did not take the GRE or the GMAT for admission into the program must take either one no later than the beginning of the second semester into their masters work.

TOEFL

In addition to the above criteria foreign students must take the TOEFL (Test of English as a Foreign Language) exam and obtain a score of 500 or better.

Background

Applicants should hold a Bachelor's degree in Construction, Construction Management, Architecture, Engineering, Business or "equivalent related fields." Transcripts of all applicants will be reviewed to ascertain successful completion of program prerequisites. "Equivalent in related fields" should include studies in construction drawings, construction materials and methods, construction accounting and finance, economic planning, structures, sitework, legal aspects of construction, cost estimating, construction scheduling and business management/finance. Students with deficiencies in these fields may need longer residence for the masters degree, as they will be required to take specified basic courses to provide a foundation for advanced courses.

Curriculum

Students seeking to obtain a Master of Science Degree in Construction Management have a choice of either a thesis or a nonthesis option. The 36 semester hour thesis option consists of a minimum of 30 semester hours of coursework and up to six semester hours of thesis. The non-thesis option consists of 36 semester

hours of coursework and may include up to six semester hours of independent studies. A student shall not register for masters thesis without first having received the approval from his/her advisor, his/her supervisory committee, and the Chairperson of the Department. A student may not register for independent studies without first having received the approval of his/her advisor, the Department Graduate Committee, and the Chairperson of the Department.

Course Requirements

Graduate credit is awarded for courses numbered 5000 and above. The work in the major field must be in courses numbered 5000 or above. For work outside the major, courses numbered 3000 or above may be taken provided they are part of a plan of study approved by the student's supervisory committee of the Department Graduate Committee, whichever is applicable. Approval must be obtained in writing prior to the student registering for such a course.

Students with deficiencies in the areas designated as equivalent related fields will be required to take 3000 and 4000 level courses in Construction Management prior to registering for any graduate level courses in order to provide the proper foundation for advanced courses. Students required to take these pre-requisite courses are advised to register them for the 'P' or 'F' (Pass or Fail) grade option and shall take them until they complete them with a grade of "P." (For graduate students taking undergraduate pre-requisite courses a "P" grade shall be considered to be equivalent to a minimum grade of "C" or better. All grades other than "P" or "F" grades (regardless of course level) will be counted when calculating the student's graduate grade point average.

The program of coursework for a masters degree must be approved by the student's advisor, supervisory committee (if thesis option), and Department Chairperson. No more than six credits from a previous masters degree program may be applied toward a second masters degree. These credits are applied only with the written approval of the Department Chairperson and the Dean of the College of Engineering and Design.

Transfer of Credit

Only graduate (5000 - 7999) level work to the extent of two courses, totaling six semester hours, earned with a grade of 'A', 'B+', or 'B' may be transferred from another institution approved by the Department Chairperson and the Dean of the College of Engineering and Design, or from post-baccalaureate work at the University. Credits transferred from other universities will be applied toward meeting the degree requirements but the grades earned will not be computed in the student's grade point average. Acceptance of transfer of credit requires approval of the student's advisor, supervisory committee (if thesis option) and the Department Chairperson. Petitions for transfer of credit for a masters degree must be made during the student's first term of enrollment in the masters program. Nonresident or extension work taken at another institution may not be transferred to Florida International University for graduate credit. No courses taken by correspondence or as part of another degree may be used toward a graduate degree.

Supervisory Committee

Students that choose the thesis option should appoint a supervisory committee as soon as possible after admission into the program, but in no case later than the second semester of graduate study. Supervisory committees for graduate degree programs are nominated by the student's selected graduate advisor and approved by the Department Chairperson. The student's proposed plan of study must be approved, in writing, by the student's graduate advisor, the supervisory committee and the Department Chairperson.

Masters Thesis

A student choosing the thesis option must, as part of his/her plan of study, prepare a written proposal of the thesis work planned for presentation to his/her graduate advisor, supervisory committee, and the Department Chairperson. This proposal must adhere to all University and Department regulations concerning format and content. Once this proposal is approved, in writing, by the student's graduate advisor, his/her supervisory committee, and the Department Chairperson, the student will be permitted to register for masters thesis.

Examination

A final comprehensive examination must be passed by both thesis and non-thesis masters candidates. This examination will be administered on campus and will cover at least the candidate's field of concentration and may include any other topics of general construction knowledge. For a candidate who elected the thesis option, the examination shall be administered by his/her supervisory committee. For a candidate who elected the non-thesis option, the examination shall be administered by an examination committee comprised of three department faculty appointed by the Department Chairperson.

Time Limitation

All work, including transferred credit, counted toward the masters degree must be completed during the seven years immediately preceding the date on which the degree is awarded.

Special Student

Students wishing to enroll in courses during the application process may do so as a special student. Students must consult an advisor for approval and complete a special student enrollment waiver. Without this waiver and advisor approval, there is no guarantee that the courses taken will be accepted for graduation. No more than 15 semester credits of work taken as a special student can be applied towards graduation. Students may take courses under the special student designation for one semester only.

General Regulations

Normal Loads

Students taking a minimum of 9 semester credit hours per semester are considered full time students at the graduate level. Students taking under 9 hours are considered part time and should be aware that certain university privileges and benefits may not be applicable to part time students. Students are not recommended to take excessive loads. Special exceptions may be made, at the option of the Department, in the case of students with a grade point average of 3.5 or greater. Students that meet this criteria wishing to take over 15 semester credit hours must have the approval of both the Chairperson of the Department and the Dean of the College of Engineering and Design, prior to registering for an overload.

Grades

The Department of Construction Management requires a minimum grade point average of 3.0 in all 5000 and 6000 level courses taken towards a masters degree. No more than 6 credits of 5000 or 6000 level courses with an earned grade less than a "B" will be accepted. The minimum acceptable grade for any work attempted as a graduate student is a "C." Students required to take 3000 and 4000 level pre-requisite courses shall take them until they complete them with a grade of "P" or better (or "C" or better). All grades other than "P" or "F" grades (regardless of course level) will be counted when calculating the student's graduate grade point average.

Grade of Incomplete

A grade of "I" (Incomplete) may be granted, at the option of the Instructor and the Department Chairperson, to a student who, due to serious, documented, and verifiable extenuating circumstances beyond his/her control (such as an illness requiring hospitalization) is unable to complete the work required to obtain a grade for a course. In no case shall a grade of "I" be granted to a student because he/she is not passing a course and desires additional time to attempt to obtain a passing grade. A student granted a grade of "I" must complete the work deemed by the Instructor necessary to complete the course no later than two semesters after the grade was assigned to the student, or the grade shall automatically revert to a grade of "F" (failing grade).

Credit By Examination

The Department does not generally offer credit by examination for required core courses or elective courses. A student with outstanding, exceptional and documented skills in a particular subject as well as an outstanding academic record may request credit by examination, and it is the option of the Department Faculty and the Department Chairperson whether to grant the request.

Credit For Non-College Learning

The Department does not award credit for credit for non-college learning (life work experience).

Student Work

The Department reserves the right to retain any and all student work for the purposes of record, exhibition or instruction.

Normal Academic Progress

The student will have maintained normal academic progress when the student earns a minimum grade point average of 3.0 for all graduate work attempted.

Course Sequence and Prerequisites

Course prerequisites are clearly indicated on the Graduate Program sheets, available in the Department office. It is the students' responsibility, not the advisor's, to ascertain that required pre-requisites have been taken and passed prior to registering for a course. Failure to comply with pre-requisite requirements may result in the student being dropped from or failed in a class without prior warning from the instructor.

Probation or Suspension

Students who do not make satisfactory academic progress may be excluded from further registration.

Class Attendance

Class attendance may be required and may be used for grade determination at the option of the instructor.

Graduation

In order to be eligible to graduate the student must have successfully completed his/her plan of study as established with the student's graduate advisor, his/her supervisory committee, and the Department Chairperson. This includes completion of all applicable graduate coursework with an overall minimum grade point average of 3.0 and no more than 6 credits of 5000 or 6000 level courses with an earned grade less than a "B." A student choosing the thesis option must also have submitted a complete masters thesis, whose format, content, and presentation must be acceptable to and approved by his/her graduate advisor, supervisory committee, and Department Chairperson. The student must additionally have successfully passed his/her final examination (See Examination, above).

Students should contact an advisor at least one semester prior to their projected graduation and request a review of his or her file. At the start of the final semester the student is required to complete and have his advisor approve an Application for Graduation, available from the Department. (See catalog for additional information on graduation procedures and scheduling.) If for any reason a student fails to graduate in the semester after ap-

plying for graduation, that student must reapply for graduation.

It is the student's responsibility, not his/her advisor's responsibility, to ascertain that all requirements for graduation, as stated in the University Catalog and in the Department Program sheets, have been met.

Core Curriculum

Required of students lacking appropriate and acknowledged (by advisor) coursework in the topics below. Maximum number of core credits applicable towards degree: 12. Students with prior specific coursework in these areas may not take these courses for credit towards degree.

BCN 5618	Fundamentals of Construction Estimating	3
BCN 5645	Construction Economic Analysis	3
BCN 5766	Codes and Regulations	3
BCN 5728	Principles of Construction Scheduling	3
BCN 5746	Construction Legal Environment	3
BCN 5406	Principle of Building Structures for Construction Management	3

Total core credits (maximum of 12 credits applicable towards degree).

Construction Management Electives

Balance of 36 credits to be taken from list below. Nine credits must be selected from courses marked with an asterisk (*). Thesis students may take up to 6 credits of BCN 6971, and all students may take up to 6 credits of BCN 5905 (see note below).

BCN 5022	Housing for Developing Countries	3
*BCN 5626	Construction Cost Analysis & Control	3
BCN 5706	Interdisciplinary Aspects of Housing	3
*BCN 5716	Productivity in Construction	3
BCN 5735	Hazardous Materials & Waste in Construction	3
*BCN 5755	Construction Financial Management	3
*BCN 5771	Management & Marketing of Const. Services	3

BCN 5772	Management of Construction Organizations	3
BCN 5784	Construction Information Services ¹	3
BCN 5905	Directed Independent Studies ¹	3-6
BCN 5906	Special Topics	3-6
BCN 6473	Systems Approach for Housing Planning	3
*BCN 6642	Value Engineering in Construction	3
BCN 6775	Decision & Risk Analysis in Construction	
*BCN 6785	Advanced Estimating and Bidding Strategy	3
BCN 6788	Artificial Intelligence in Construction Management	3
BCN 6916	Developments in Construction Technologies	3
BCN 6935	Graduate Seminar	3
BCN 6971	Thesis ¹	

¹Note: A student shall not register for BCN 5905 or BCN 6971, without the approval of his/her advisor, Department Graduate Committee (or Supervisory Committee), and the Department Chairperson.

Course Descriptions

Definition of Prefixes

BCN-Building Construction

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

Student programs of study in the graduate level program are carefully designed and sequenced following consultation with a graduate faculty advisor. Appropriate prerequisite coursework is assigned on the basis of individual needs.

BCN 5022 Housing for Developing Countries (3). Problems faced by developing countries in housing their population. Political, economic, social, and technical considerations in decision process.

BCN 5406 Principles of Building Structures for Construction Management (3). Applications of the principles of mechanics to engineering problems of equilibrium, strength, and stiffness. Topics include equilibrium of forces, stress, strain, torsion, beams, and columns. (F)

BCN 5618 Fundamentals of Construction Estimating (3). Principles and practices of estimating provid-

ing application and drill in surveying quantities of labor and materials for general construction projects: excavation, concrete and formwork, carpentry, masonry, structural steel, lath and plaster, interior finishes. (F)

BCN 5626 Construction Cost Analysis and Control (3). Description of different types of estimating techniques in relation to different stages in a construction project. Productivity analysis, measurement of progress, and techniques of cost control are covered. Prerequisites: BCN 4612.

BCN 5645 Construction Economic Analysis (3). Nature of construction costs, funding sources and arrangements, capital requirements, bonding, insurance, risk and contingency evaluation, general office operations, and bidding procedures. (F)

BCN 5706 Interdisciplinary Aspects of Housing (3). Recognition and definition of those factors which affect the planning, financing, and construction of housing projects. The operations and responsibilities of a multidisciplinary team dealing with decision process. This course takes a critical look at the housing delivery system to include: how the housing industry operates, various technologies prevalent in housing construction, and constraints to housing. The course will also look at the future, examining problems and forces that will shape opportunities.

BCN 5716 Productivity in Construction (3). An in-depth study of common issues relating to productivity improvements in construction. Prerequisite: BCN 4612 or equivalent. (F)

BCN 5728 Principles of Construction Scheduling (3). The application of the Critical Path Method and Program Evaluation Review Technique to construction planning, scheduling vs. actual job expenditures. Cost forecasting development of unit prices from field data. Laboratory is included which consists of computer applications. (F)

BCN 5735 Hazardous Materials and Waste in construction (3). Discussion of the common hazardous materials and waste regulations found in construction activities.

BCN 5741 Construction Claims (3). Construction claims administration and avoidance. Covers the importance of construction contract errors, unforeseen and changed conditions, disruptions, acceleration,

termination, and proving of claims.

BCN 5746 Construction Legal Environment (3). Legal and business aspects of engineering contracts and specifications in the construction industry. Analysis, study of precedents, and application of contract clauses, including changes, changed conditions, termination, disputes, payments, risk and insurance, inspection, liquidated damages, and technical requirements. (S)

BCN 5747 Construction Law Case Studies (3). Case study and analysis of reported appellate decisions on common construction law issues; licensing; bid disputes; contract issues; construction lien law; surety problems; and unresolved claims.

BCN 5755 Construction Financial Management (3). Money management in construction operations: financing, funding, sources of money, cash flow, disbursement, liability and bonding, cost and managerial accounting, and profit analysis.

BCN 5766 Codes and Regulations (3). Study of building codes required by local, county, and state levels and their relation to quality control. (S)

BCN 5771 Management and Marketing of Construction Services (3). Human effectiveness in marketing construction management services in the public and private sectors.

BCN 5772 Management of Construction Organizations (3). This course studies the management of a construction company. Topics included are: company organization, incorporation structures, policies and procedures, finance, accounting, information modeling, bidding strategies, and operation. Prerequisite: BCN 3753 or BUL 4320 or BCN 3740.

BCN 5774 Topics in International Construction (3). Introduction to procurement, financing and management of international construction projects with emphasis on international economics, contracts, trade agreements and specifications. Prerequisite: Permission of the instructor.

BCN 5784 Construction Information Systems (3). The application of information management techniques, including computer hardware and software systems, to the analysis and solution of typical problems in

the practice of construction management.

BCN 5905 Directed Independent Studies (VAR). Individual studies under supervision of faculty, tutor, or advisor.

BCN 5906 Special Topics (VAR). Intensive study for small group of students in a particular topic, or a limited number of topics not otherwise offered in the curriculum.

BCN 6473 Systems Approach for Housing Planning (3). Discussions of basic concepts of systems analysis and systems approach to the field of housing planning. The advantage of systems approach. Case studies.

BCN 6642 Value Engineering in Construction (3). Relationship of costs to time and life cycle of construction projects, and methods to improve the economic value of construction projects.

BCN 6775 Decision and Risk Analysis in Construction (3). Techniques of decision analysis for the medium to top level management personnel in the construction industry. Typical construction related problems that involve risk and uncertainty are studied. Prerequisites: STA 3132, BCN 3640, and BCN 4612.

BCN 6785 Advanced Estimating and Bidding Strategy (3). Application of computer software to rigorous exercises in construction estimating. Cost information related to construction with applications in current practice.

BCN 6788 Artificial Intelligence Applications in Construction Management (3). The course presents a study of the concepts, techniques, and applications of AI technology in the construction management domain. Prerequisites: COP 2172 and BCN 5784.

BCN 6916 Developments in Construction Technologies (3). Study of advanced field techniques and emerging uses worldwide. Information flow and creativity are highlighted as crucial elements which stimulate new developments. This course prepares the students to understand and deal with concepts of change. Prerequisite: BCN 5716.

BCN 6935 Seminar on Construction Management (3). Advanced study of problems, trends, and issues in a time of rapid change in building

and management technology. Topics selected or developed by class.

BCN 6971 Thesis (3-6). Students develop a thesis under the direction of a senior faculty mentor, and their supervisory committee, and advance and defend their propositions before an audience of peers, scholars, and their supervisory committee.

College of Engineering and Design

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Associate Dean for Academic Programs **James R. Story**
Associate Dean for External Programs **Gustavo A. Roig**
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Chairperson, Industrial Systems and Engineering **Shih-Ming Lee**
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- Yen, Kang K., Ph.D.** (Vanderbilt University), Associate Professor, Electrical and Computer Engineering
- Yih, Tachung, Ph.D.** (Catholic University of America) Associate Professor, Mechanical Engineering
- Zhao, Fang, Ph.D., P.E.** (Carnegie Mellon University), Assistant Professor, Civil and Environmental Engineering

College of Health

College of Health

Judith A. Blucker, *Acting Dean*
Evelyn B. Enrione, *Associate Dean*
Anihony Cruz, *Assistant Dean*

The College of Health offers programs of professional study in select health professions. The academic departments of the College offer courses of study leading to a baccalaureate degree in Dietetics and Nutrition, Health Information Management, Medical Laboratory Sciences, Occupational Therapy, and Physical Therapy. Master's degrees are offered in Dietetics and Nutrition, Medical Laboratory Science, Occupational Therapy, Physical Therapy, and Public Health. A Doctor of Philosophy is offered by Dietetics and Nutrition. All degree programs are appropriately accredited by their respective professional accrediting bodies.

Applicants to the College must submit an Application for Admission to the University and must follow regular University procedures. Applicants must be eligible for admission to the University before being admitted to any degree program. Because the college's programs have different requirements, students interested in admission to any program in the College should contact the department admission requirements.

The goals of the College of Health are to:

1. Prepare health professionals at the undergraduate and graduate levels.
2. Promote close articulation between the appropriate programs and the community clinical sites for the experimental learning of our students.
3. Increase the knowledge base of the health disciplines through research.
4. Provide service to the health professions at the local, regional, national and/or international levels.

Academic Support Services

For the College of Health, the Graduate Student Support Services are coordinated by Dr. Evelyn B. Enrione, Associate Dean. Academic support services is responsible for the coordination of academic advising and student services for the College. Student Support Services keeps students informed on educational opportunities such as scholar-

ships, graduate assistantships, tuition waivers, and campus resources; and serves as a liaison between the academic departments and the student support services university wide.

A student who has been accepted to a graduate degree program in the College must consult an advisor prior to the first class enrollment. An advisor may be assigned by contacting the Chairperson of the Department in which a graduate major is desired. Continued contact (at least once per semester) with the advisor is urged to review progress and select courses for each succeeding semester.

Note: The programs, policies, requirements and regulations listed in this catalog are continually subject to review. In order to serve the needs of the University's various publics, and to respond to the mandates of the Florida Board of Regents and the Florida Legislature, changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

Dietetics and Nutrition

Susan P. Himburg, *Professor, Chairperson, and Director, Coordinated Program*
Katharine R. Curry, *Professor Emeritus*
Victoria Hammer Castellanos, *Assistant Professor*
Zisca Dixon, *Assistant Professor*
Penelope S. Easton, *Professor Emeritus*
Evelyn B. Enrione, *Associate Professor and Associate Dean*
Valerie George, *Assistant Professor*
Fatma Huffman, *Professor, Director of Graduate Programs*
Amy Jaffe, *Clinical Instructor, Director Dietetic Internship*
Michele W. Keane, *Associate Professor*
Marcia Magnus, *Associate Professor*
Dian Weddle, *Associate Professor*
Nancy S. Wellman, *Professor*

The Department offers graduate programs leading to a Master of Science or a Doctor of Philosophy in Dietetics and Nutrition. The M.S. program is designed to meet the needs of professional practitioners as well as students with undergraduate degrees in related fields. There is an opportunity for students to complete the requirements to sit for the National Registration Exam for Dietitians by applying to the Dietetic Internship in conjunction with the master's program. In some cases prerequisites must be met before enrolling in graduate courses. Interested students should contact the department prior to applying for admission.

Minimum entrance requirements under current Board of Regents policy must be met. For the M.S. this includes a combined score of 1000 on the Verbal and Quantitative Aptitude Test of the Graduate Record Examination or at least a 'B' (3.0 on a 4.0 scale) average in all upper division work. For the Ph.D., an M.S. degree, 3.0 GPA and 1000 GRE are required. Application procedures for admission are detailed in the University procedures for admission to graduate study.

Students who are candidates for the Master of Science degree in Dietetics and Nutrition must complete a minimum of 37 semester hours of graduate study including at least 30 hours at this University. All coursework must be recent enough to be

relevant to the contemporary field of nutrition. Ph.D. students must complete a minimum of 55 hours after M.S. degree.

The Dietetic Internship (DI) is currently granted accreditation status by The Commission on Accreditation/Approval for Dietetics Education of The American Dietetic Association, a specialized accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and the United States Department of Education.

The program begins each Fall semester and is completed by the following June. Students have the opportunity for supervised dietetic practice in outstanding health care facilities in South Florida. Enrollment is limited and requires a separate application available from the department. Students must complete at least 15 hours of graduate work at FIU prior to the application deadline of February 15. To be eligible, students must have completed an ADA Didactic program and be admitted to the graduate program.

Students must meet all graduation requirements for the M.S. degree in order to receive the verification statement of Dietetic Internship program completion.

Master of Science in Dietetics and Nutrition

Students' programs will be planned to support their career goals in consultation with the assigned faculty advisor. Retention and graduation in the master's program requires maintenance of a 3.0 GPA.

Course Requirements

Required Core (23)

Research: (14)

DIE 6568	Research Methods in Dietetics	3
DIE 6937	Graduate Seminar in Dietetics (two semesters)	1
STA 6166	Statistical Methods in Research	3
DIE 6971	Thesis in Dietetics and Nutrition	6

Nutrition Core: (9)

Students must take at least three out of five courses. One course must be in macronutrients, one in micronutrients

HUN 5245	Nutrition and Biochemistry	3
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HUN 6307	Carbohydrates and Lipids	3
HUN 6327	Proteins	
HUN 6335	Functions of Vitamins	3
HUN 6355	Minerals in Human Nutrition	3

Recommended Electives¹: (14)

ANT 6469	Graduate Medical Anthropology	3
DIE 6368	Advanced Techniques in Dietetic Practice	2
DIE 6368L	Advanced Techniques in Dietetic Practice Lab	1
DIE 6929	Specialized Short Course in Dietetics and Nutrition	1
FOS 6236	Food Toxicology and Food Safety	3
HUN 5123	Ethnic Influences on Nutrition and Food Habits	3
HUN 6295	Contemporary Issues in Food and Nutrition	3
HUN 5621	Food, Nutrition and Communication	3
HUN 6248	Sports Nutrition	3
HUN 6249	Nutrition and Physical Function	3
HUN 6254	Drug and Nutrient Interaction	3
HUN 6255	Nutrition and Wellness	3
HUN 6266	Nutritional Assessment	3
HUN 6435	Nutrition and Aging	3
HUN 6522	Public Health Nutrition	3

¹Courses that are not linked as recommended electives may be taken or approved by advisor/Program Director.

Doctor of Philosophy in Dietetics and Nutrition

Coursework will be planned to support the research and career objectives of the student. A maintenance of 3.0 GPA in all coursework is required

Course Descriptions

Definition of Prefixes

DIE-Dietetics; FOS-Food Science; FSS-Food Service Systems; HUN-Human Nutrition

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

DIE 5247 Trends in Therapeutic Nutrition (3). Evaluation and Interpretation of current research in dietary care of metabolic diseases.

DIE 5936 Advanced Practice Seminar (1-3). Designed to provide didactic components in tandem with practice learning experiences in health care institutions. Covers material in clinical dietetics, management, and community nutrition. Utilizes a team approach and will draw on specialists from all areas of dietetics. Corequisites: DIE 5946, DIE 5947, DIE 5948 or permission of instructor. (S)

DIE 5946 Advanced Practicum in Community Nutrition (1-6). Pre-planned clinical experience at the professional level in community nutrition. Prerequisite: Permission of instructor. DI course does not count towards M.S. degree. (S)

DIE 5947 Advanced Practicum in Dietetic Administration and Management (1-6). Pre-planned clinical experience at the professional level in dietetic administration and management. Prerequisite: Permission of instructor. DI course does not count towards M.S. degree. (F)

DIE 5948 Advanced Practicum in Clinical Nutrition (1-6). Pre-planned clinical experience at the professional level in clinical therapeutic nutrition. Prerequisite: Permission of instructor. DI course does not count towards M.S. degree. (F)

DIE 6128 Advanced Management of Dietary Systems (3). Application of management and organizational theory to dietetic systems in health and community institutions.

DIE 6256 Enteral Nutrition (3). The specific indications for enteral feeding are discussed with special emphasis on the unique requirements, and feeding techniques for specific disease states. Prerequisites: Physiology, Biochemistry, Diet Therapy I and II.

DIE 6257 Parenteral Nutrition (3). Clinical and metabolic advances in the parenteral feeding of the adult patient in relation to specific disease states. Prerequisites: Physiology, Biochemistry.

DIE 6259 Management of Nutrition Services (3). Development and comparison of systems models used to plan, organize, staff, direct and control clinical nutrition services. Emphasis on cost effective/cost benefit analysis approach. Prerequisite: Graduate management course.

DIE 6367 Entrepreneurial Dietetics (3). Focus on the dietitian as a

owner/partner or top level manager. Emphasizes business management principles as applied to dietetics and nutrition. Prerequisite: DIE 6128 or equivalent.

DIE 6368 Advanced Techniques in Dietetic Practice (2). Techniques and approaches in changing nutritional behavior, establishing private practice, providing dietetic services in various size institutions, hospitals, nursing homes, and in the community. Prerequisites: DIE 4435, DIE 4435L or equivalent. Corequisite: DIE 6368L. (S, even years)

DIE 6368L Advanced Techniques Dietetic Practice Lab (1). Individual practice in conducting interviews, planning nutritional care, changing nutritional behavior, and providing dietetic consultation. Prerequisite: Permission of instructor. Corequisite: DIE 6368. (S, even years)

DIE 6438 Dietetic Programs for Post Secondary Settings (3). Review of techniques and materials. Emphasis on preparing documents for accreditation and approval of dietetic programs. Prerequisite: Permission of instructor.

DIE 6565 Computer Application in Dietetic & Nutrition Research (3). Application of various computer software programs to research problems. Prerequisite: Permission of instructor.

DIE 6568 Research Methods in Dietetics (3). Consideration of scientific methods and theoretical orientation as applied to research in dietetics. Special consideration given to various techniques of investigation, data collection, data organization, and interpretation. Prerequisites: Permission of instructor.

DIE 6569 Case Study Method in Research (3). Development and analyses of the case study method in research. Prerequisite: Permission of instructor.

DIE 6578 Field Research Methods in Dietetics (2). Application of field research methods in interpreting and designing research studies. Introduction to interdisciplinary research approaches. Prerequisite: DIE 6568.

DIE 6906 Readings in Dietetics and Nutrition (1-3). Individual advanced study in a comprehensive overview of dietetics and nutrition or in-depth advanced study of a specialty. Prerequisites: Permission of instructor

and advanced standing in graduate program. (F,S,SS)

DIE 6907 Individual Study in Dietetics (1-3). Intensive individual investigation of a phase of dietetics. Emphasis on recent findings in dietetics and allied disciplines. Prerequisite: Permission of the Instructor. (F,S,SS)

DIE 6915 Supervised Research (1). Continuation of thesis research under thesis director. Repeatable. Prerequisite: Completion of all other required coursework. (F,S,SS)

DIE 6929 Specialized Short Courses in Dietetics and Nutrition (1-3). Intense courses on specialized topics in dietetics and nutrition for the advanced student or professional. Topic based on current nutrition concerns. Prerequisites: Advance graduate standing and permission of instructor.

DIE 6935 Special Topics in Dietetics (3). In-depth study of historical, epidemiological, prevention, and treatment aspects of topics related to dietetics. Prerequisites: Competence in topic covered, admission to graduate program.

DIE 6937 Graduate Seminar in Dietetics and Nutrition (1). Presentations by researchers, practitioners, and graduate majors related to advances in theories and applications in nutrition and dietetics. Two semester enrollment required of all graduate students. (F,S)

DIE 6971 Thesis in Dietetics and Nutrition (1-6). Prerequisites: DIE 6578 or HUN 6811, 12 hours of graduate study and permission of Thesis Director. (F,S,SS)

DIE 7437L Nutrition Counseling Supervision (2). Covers techniques for advising on food choices and providing support for life style changes to meet wellness goals or treat diseases. Prerequisites: DIE 6368 and DIE 6368L.

DIE 7566 Research Concept Development in Dietetics and Nutrition (3). Grant proposal writing for dietetic and nutrition research. Prerequisite: DIE 6568.

DIE 7980 Dissertation (3-12). Research for doctoral dissertation. Prerequisite: Advancement to candidacy in doctoral program.

FOS 6236 Food Toxicology & Food Safety (3). Will cover causes of food borne illness, prevention procedures and methods for employee educa-

tion. Prerequisites: Graduate standing and food science competency.

FSS 6317 Human Resources Management in Nutrition Services (3). Application of human resources theory to nutrition services; raising productivity and service quality. Prerequisite: Advanced management course.

FSS 6367 Operations Analysis in Food Service and Nutrition Care Systems (3). Models and methods of budget and service forecasting related to food service and nutritional care in large and small institutions of short and long term care. Prerequisites: Advanced graduate standing, DIE 6128 or equivalent.

FSS 6535 Computer Assisted Food and Nutritional Services Management (3). Advanced course in computer analysis and utilization for detection and resolution of problems of food service and nutritional care. Prerequisites: Advanced graduate standing, DIE 6128 or equivalent, and computer competency.

FSS 6535L Computer Assisted Food and Nutritional Services Management Lab (1). Laboratory application in computer analyses and utilization in food services and nutrition care. Prerequisite: Advanced Graduate Standing. Corequisite: FSS 6535.

HUN 5123 Ethnic Influences on Nutrition and Food Habits (3). Systematic study of food habits of various cultural groups. Emphasis on methodology, analysis of data, relationship of food habits to nutritional standards, and corrective measures. Includes laboratory. Prerequisite: Competency in food preparation and nutrition. Recommended for non-majors.

HUN 5195 International Nutrition: Problems, Policies, and Planning (3). Advanced study of magnitude, causes and nature of undernutrition in developing countries; emphasis on programs, planning and policies directed toward alleviating hunger. Prerequisite: Permission of instructor. Recommended for non-majors.

HUN 5245 Nutrition and Biochemistry (3). Advanced study of the relationship of nutrition and biochemistry with emphasis on digestion, absorption, metabolism of nutrients, and determination of norms. Prerequisites: Organic Chemistry.

HUN 5611 Nutrition Education in the Community (3). In-depth study of nu-

trition education information and methods in the community including the nutrition education component of school food service and other congregate meal programs. Prerequisite: Recent courses in nutrition education or permission of instructor.

HUN 5621 Food, Nutrition and Communication (3). Concepts and techniques for effective professional communication with individuals, groups and other professionals. Emphasis on communication via mass media. Prerequisites: Competency in food and nutrition knowledge.

HUN 6196 Food Economics (3). In-depth study of forces and policies affecting the procurement, preparation and utilization of food in society. Prerequisite: Advanced graduate standing.

HUN 6248 Sports Nutrition (3). The relationship between nutrition, fitness and athletic performance for trained and untrained athletes will be examined. Prerequisites: Basic Nutrition, Physiology. (S, odd years)

HUN 6249 Nutrition and Physical Function (3). Covers food intake relationships, physical development and physical performance. Emphasis will be on subgroups of the population. Prerequisites: Competence in nutrition and physiology and advanced graduate standing.

HUN 6254 Drug and Nutrient Interaction (3). The interaction of drug and nutrient metabolism in relation to optimum nutrition. Prerequisites: Advanced Nutrition, Biochemistry, Physiology.

HUN 6255 Nutrition in Wellness Program (3). Covers content and importance of nutritional aspects of wellness education programs and interrelationships between nutrition and exercise in prevention of common diseases. Prerequisite: Permission of instructor. (F, even years)

HUN 6257 Physio/Psychology of Food Intake (3). Consideration of scientific inquiries into eating and drinking behavior which will assist in planning nutrition education/counseling. Prerequisites: DIE 6368 and DIE 6368L.

HUN 6266 Nutritional Assessment (3). In-depth study of the methodology and application of nutritional assessment. Prerequisites: Advanced Nutrition, physiology, and biochemistry.

HUN 6295 Contemporary Issues in Food and Nutrition (3). Updating food and nutrition information through the study of current research. Prerequisites: HUN 5245.

HUN 6307 Carbohydrates and Lipids (3). The biological, physiological and metabolic functions of carbohydrate and lipids as they relate to human nutrition. Prerequisites: Biochemistry, Advanced Nutrition and Physiology.

HUN 6327 Proteins (3). The biological, physiological and metabolic functions of proteins, as they relate to human nutrition. Prerequisites: Biochemistry, Advanced Nutrition and Physiology.

HUN 6335 Functions of Vitamins (3). Integration of chemical, biological and physiological functions of vitamins as related to human nutrition. Prerequisites: Advanced Nutrition, Biochemistry, Physiology. (SS, even years)

HUN 6355 Minerals in Human Nutrition (3). The physiological and metabolic functions of selected macro- and trace minerals as they relate to nutritional status in humans. Prerequisites: Advanced Nutrition, Biochemistry, Physiology. (SS, odd years)

HUN 6435 Nutrition and Aging (3). Changes associated with aging and the impact of nutrition on these changes. Prerequisite: Permission of instructor. (S, odd years)

HUN 6522 Public Health Nutrition (3). Development and assessment of nutrition programs for the general population throughout the life cycle. Prerequisite: Permission of instructor.

HUN 6811 Laboratory Research Methods in Dietetics (2). Laboratory application of research methods in dietetics. Prerequisites: DIE 6568 and consent of instructor.

Medical Laboratory Sciences

Beverly A. Warden, Associate Professor and Chairperson

Barbara V. Anderson, Assistant Professor and Director, Medical Technology Program

Jerry A. Bash, Associate Professor
Manoucher Dezfulian, Associate Professor

Janet A. Lineback, Professor

Patrick F. Shen, Associate Professor

Sylvia L. Smith, Professor and Graduate Coordinator

Master of Science in Medical Laboratory Sciences

Admission to the Master of Science degree program in Medical Laboratory Sciences represents a judgment as to the probability of the student's success in graduate work. This judgment is usually based on a variety of factors including the student's undergraduate academic record, specific admission test scores, letters of recommendation, and letter of intent. To be admitted, a student must meet the following minimum requirements:

1. Satisfactorily meet the University's general requirements for admission. (Consult the General Information section for details.)

2. Hold a bachelor's degree, or equivalent, in medical technology or related scientific discipline from an accredited institution.

3. Have completed a minimum of two years of chemistry, one year of mathematics including statistics, two years of biology including immunology and biochemistry.

4. Individuals who do not possess a bachelor's degree in Medical Technology must complete 7 semester hours of undergraduate clinical coursework in one of the specialty areas or possess equivalent clinical experience. An applicant lacking in course background may be admitted with deficiencies on condition that these deficiencies be made up within one year of the date of admission. Credits earned in making up these deficiencies will not count toward the graduate degree.

5. Have a minimum cumulative GPA of 3.0 during the last two years of the undergraduate program or a minimum combined score of 1000 on the quantitative and verbal portions of the Graduate Record Examina-

tion (GRE) or a minimum combined score of 1500 on the three-part GRE.

6. Submit at least two letters of recommendation from academic professors, supervisors/employers and/or professional associates who are in a position to comment on the applicant's potential for graduate work.

7. Submit an autobiographical statement or letter of intent (not to exceed 1000 words) which includes educational goals and career projections. Applicants may also include copies of previous written scientific work.

8. Students whose native language is other than English must demonstrate an adequate level of proficiency in English as judged by a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). Foreign students who have not met this requirement may be conditionally admitted and allowed to enroll in an intensive English language program prior to beginning coursework in medical laboratory sciences. Satisfactory English proficiency must be demonstrated within the first year of study.

9. Approval from the Departmental Graduate Committee.

Degree Requirements

The Master of Science in Medical Laboratory Sciences offers two options, a thesis track, and a non-thesis track. Students enrolled in the thesis program must complete a minimum of 36 credits including a thesis based upon the student's original research. Students enrolled in the non thesis track must complete 45 credits of coursework and a comprehensive examination. A maximum of six credits of graduate coursework may be transferred from other institutions subject to approval by the Graduate Committee. A full time student taking nine credits per semester (including summer) can complete the program in two years.

Students holding a baccalaureate degree in science who desire to complete the thesis track but lack adequate clinical background will be required to complete a minimum of 7 credits of undergraduate coursework in one of the specialty areas. Students holding a baccalaureate degree in science who desire to complete the non thesis track but lack adequate clinical experience must complete the certificate program in one of the specialty areas. The undergraduate courses or

certificate program to be completed will be determined by the Graduate Committee at the time of admission. Undergraduate credits are in addition to graduate level course requirements. They may not be substituted for graduate courses.

Thesis Track

Core Courses	12
Specialty Courses	9
Electives	6
Graduate Seminars	3
Thesis	6

Non Thesis Track

Core Courses	12
Specialty Courses	15
Electives	12
Graduate Seminars	3
Applied Independent Research Project	3
Oral Comprehensive Exam	

Core Courses

MLS 5175	Advanced Clinical Pathology	3
MLS 5515	Advanced Diagnostic Immunology	3
MLS 5610	Advanced MLS Workshops (3 required)	1
MLS 5785	Research Methods in Medical Laboratory Sciences	3

Specialty Courses: Clinical Chemistry

MLS 6645	Advanced Clinical Analytical Systems	3
MLS 6665	Clinical Endocrinology	3
MLS 5675	Clinical Protein Chemistry	3
MLS 5685	Therapeutic Drug Monitoring and Clinical Toxicology	3
MLS 5684	Metabolic Effects of Toxic Substances	3
MLS 5190	Molecular Pathology	3

Specialty Courses: Hematology

MLS 5328	Diagnostic Hematological Cytology and Cytochemistry	3
MLS 6329	Hematological Oncology	3
MLS 5345	Advanced Hematology/Hemostasis	3

**Specialty Courses:
Immunohematology**

MLS 6575	Advanced Blood Banking	3
MLS 6595	Advanced Immunohematology	3
MLS 5590	Human Blood Group Systems	3
MLS 6944, 6945, 6946	Advanced Blood Banking Practicum I, II, III	3
MLS 5585	Human Histocompatibility Antigens	3

**Specialty Courses:
Clinical Immunology**

MLS 5585	Human Histocompatibility Antigens	3
MLS 6180	Immunopathology	3
MLS 6939	Advanced Topics in Medical Laboratory Sciences	3

**Specialty Courses:
Clinical Microbiology**

MLS 6425	Advanced Clinical Mycology	3
MLS 6468	Molecular Mechanisms of Infectious Diseases	3
MLS 5475	Medical Virology	3
MLS 5495	Agents of Foodborne Disease	3

Electives

In consultation with the advisor, the student may select a maximum of six credits outside the Department of Medical Laboratory Sciences which are not limited to but may include graduate courses in biological sciences, chemistry, health care administration, educational methodology, computer sciences, and business administration.

Courses Descriptions**Definition of Prefixes**

MLS - Medical Laboratory Sciences
F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

MLS 5175 Advanced Clinical Pathology (3). Advanced study of pathological conditions affecting the major organ systems with emphasis on clinical diagnosis using laboratory methods. Prerequisite: Graduate standing or permission of instructor. (F)

MLS 5190 Molecular Pathology (3). Overview of recombinant DNA, molecular mechanisms of human diseases (e.g. cancer), DNA-based diagnostic methods, biotechnology applications of recombinant DNA to produce human proteins for therapeutic uses. Prerequisites: Courses in Biochemistry and Clinical Chemistry or permission of instructor.

MLS 5328 Diagnostic Hematological Cytology/Cytochemistry (3). Morphological, cytochemical, cytogenetic and immunological techniques for precise and accurate blood cell identification that provide invaluable information for diagnosis, treatment and prognosis. Prerequisite: Graduate standing or permission of instructor.

MLS 5345 Advanced Hematology/Hemostasis (3). An advanced course dealing with a number of selected topics of current interest in clinical hematology/hemostasis. Emphasis will be placed on erythrocyte disorders and blood coagulation. Prerequisite: Graduate standing or permission of instructor.

MLS 5425C Medical Mycology (3). Study of the essential procedures and criteria in the identification of pathogenic fungi. Recognition of fungal contaminants commonly encountered in clinical specimens. Actinomyces. Antimycotic agents. Mycoserology. Stains, reagents, and media. Prerequisite: Graduate standing or permission of instructor.

MLS 5425L Medical Mycology Laboratory (1). Laboratory to accompany MLS 5425.

MLS 5475 Medical Virology (3). The nature of viruses and viral disease. Types of human viral infections, their detection and prevention. Current diagnostic procedures. Prerequisite: Graduate standing or permission of instructor.

MLS 5495 Agents of Foodborne Disease (3). Natural history of foodborne diseases. Microorganisms involved in food processing, food spoilage, foodborne illness and food intoxication. Investigation of foodborne diseases outbreaks. Prerequisite: MLS 4405 or permission of instructor.

MLS 5515 Advanced Diagnostic Immunology (3). A course describing the principles, performance, quality control and applications of immunological methods used in clinical laboratories and research. Prerequisite: Graduate standing or permission of instructor. (S)

uisite: Graduate standing or permission of instructor. (S)

MLS 5585 Human Histocompatibility Antigens (3). A comprehensive study of the serology, clinical relevance, immunology and genetics of the human histocompatibility antigens. Prerequisite: Graduate standing or permission of instructor.

MLS 5590 Human Blood Group Systems (3). An in-depth study of serology, clinical relevance, immunology, genetics and the biochemistry of the human red cell, white cell and platelet antigens and antibodies. Prerequisite: Graduate standing or permission of instructor.

MLS 5610 Advanced MLS Workshop (1). A short intensive treatment of selected clinical research techniques: DNA & PCR, HPLC, flow cytometry, gel electrophoresis and blotting, ELISA, animal handling. Prerequisite: Graduate status or permission of instructor. (F,S)

MLS 5615 Research Instrumentation and Techniques (3). This course is designed to introduce the beginning graduate student to research instrumentation and techniques in the specialized areas of the medical laboratory sciences. Prerequisite: Graduate standing or permission of instructor.

MLS 5675 Clinical Protein Chemistry (3). Lectures dealing with isolation and identification of clinically significant proteins and enzymes. Pathological conditions and interpretation of laboratory data. Prerequisite: Graduate standing or permission of instructor.

MLS 5684 Metabolic Effect of Toxic Substances (3). General principles of toxicology as well as a discussion of types of tissue injury produced in organ systems. Prerequisite: graduate standing.

MLS 5685 Therapeutic Drug Monitoring and Clinical Toxicology (3). Lectures dealing with pharmacokinetic and pharmacodynamic principles, methods of analysis, medico-legal aspects of drug testing, quality assurance. Prerequisite: Graduate standing or permission of instructor.

MLS 5785 Research Methods in Medical Laboratory Sciences (3). Introduction to clinical and industrial research methods/experimental designs. Analysis of scientific literature. Review of statistical analysis of data.

Prerequisite: Graduate standing or permission of instructor. (F)

MLS 6180 Immunopathology (3). The student will study the pathology of immunological processes occurring naturally and/or under disease conditions. Prerequisite: Graduate standing or permission of instructor.

MLS 6329 Hematology Oncology (3). A detailed study of MLS hematological neoplasms, in which the etiology, pathophysiology, clinical and laboratory diagnosis of leukemias, lymphomas and other malignant diseases will be considered. Prerequisite: Graduate standing or permission of instructor.

MLS 6425 Advanced Clinical Mycology (3). Study of fungi which cause disease in man and animals. Application of genetic, biochemical and ultrastructural procedures in the identification of fungi including the use of monoclonal antibodies. Prerequisite: Graduate standing or permission of instructor.

MLS 6468 Molecular Mechanisms of Infectious Disease (3). Study of molecular mechanisms of microbial pathogenicity as it relates to human infections. Examination of the processes by which infection leads to disease. Disease prevention. Prerequisite: Graduate standing or permission of instructor.

MLS 6575 Advanced Blood Banking (3). A comprehensive study of the techniques and methods used to acquire, prepare, store, test and transfuse blood and its components. Prerequisite: Graduate standing or permission of instructor.

MLS 6595 Advanced Immunohematology (3). A comprehensive study of antigen-antibody reactions and analogous phenomena as they relate to the pathogenesis and clinical manifestations of blood disorders. Prerequisite: Graduate standing or permission of instructor.

MLS 6645 Advanced Clinical Analytical Systems (3). Current analytical concepts and analytical systems in clinical chemistry. Solid phase technology. Ion-specific electrodes. Centrifugal analyzers. Fluorescence polarization. Robotics. Prerequisite: Graduate standing or permission of instructor.

MLS 6665 Clinical Endocrinology (3). Lectures dealing with the anatomy, physiology and biochemistry of endocrine diseases. Laboratory testing

procedures and approaches, clinical significance and interpretation of laboratory data. Prerequisite: Graduate standing or permission of instructor.

MLS 6905 Independent Study (1-6). In-depth study of a special topic requiring assigned readings, optional laboratory assignments, seminar participation, and final report. Prerequisite: Permission of instructor. (F,S)

MLS 6910 Directed Independent Research (1-6). Investigation of a problem in the area of medical laboratory sciences requiring independent research at the graduate level. Supervision by graduate faculty. Prerequisite: Permission of advisor/instructor. (F,S)

MLS 6915 Applied Individual Research in Medical Laboratory Sciences (3). Individual applied research in Medical Laboratory Science undertaken and reported under the direction of a faculty member. Prerequisite: Permission of instructor. (F,S,SS)

MLS 6938 Graduate Seminar (1). Oral presentation of literature review or research. Prerequisite: Graduate standing or permission of instructor. (F,S)

MLS 6939 Advanced Topics in Medical Laboratory Sciences (3). Current topics in medical laboratory sciences not otherwise covered in the curriculum. Review of literature and discussion of the selected topics. May be repeated for credit with different subject content. Prerequisite: Graduate standing or permission of professor. (F,S)

MLS 6944 Advanced Blood Banking Practicum I (3). A laboratory course providing in-depth practical experience in the various aspects of Blood Banking in a community blood center and hospital transfusion service. Prerequisite: Graduate standing or permission of instructor.

MLS 6945 Advanced Blood Banking Practicum II (3). A laboratory course providing in-depth practical experience in the various aspects of Blood Banking in a community blood center and hospital transfusion service. Prerequisite: Graduate standing or permission of instructor.

MLS 6946 Advanced Blood Banking Practicum III (3). A laboratory providing in-depth practical experience in the various aspects of Blood Banking in a community blood center

and hospital transfusion service. Prerequisite: Graduate standing or permission of instructor.

MLS 6971 Master's Thesis (1-6). Supervised research on an original research project submitted in partial fulfillment of Master's degree requirement. Minimum requirement of six credit hours. Prerequisite: Permission of major instructor. (F,S,SS)

Occupational Therapy

Pamela Shaffner, *Clinical Associate Professor and Chairperson*

Alma Abdel-Mohy, *Clinical Assistant Professor and Undergraduate Coordinator*

Elise Bloch, *Clinical Assistant Professor*

Susanne D'Agati, *Assistant Professor*

Gail Ann Hills, *Professor and Graduate Coordinator*

Susan Kaplan, *Associate Professor*

James Mills, *Clinical Associate Professor*

Patricia Scott, *Associate Professor*

Master of Science in Occupational Therapy

The curriculum is composed of three main components: a core of occupational therapy courses to increase understanding of the theoretical bases and current issues of occupational therapy practice; a research core to develop critical problem solving, research, and writing skills; and a clinical specialty component that students design with approval of faculty. In the clinical specialty area, students have the opportunity to take four elective courses and develop projects and papers in addition to their thesis in their area of clinical interest. The course of study is designed for advanced study for certified occupational therapists and permits part-time enrollment.

Admission Requirements

To be admitted to the Master's degree program students must:

1. Hold a bachelor's degree from an accredited institution. Students who do not hold a bachelor's degree in Occupational Therapy must complete the professional certificate in Occupational Therapy after admission to the graduate program.

2. Have completed an accredited curriculum in occupational therapy. Students who have not completed an accredited curriculum in occupational therapy can be admitted to the master's program, but must also complete the Professional Certificate in Occupational Therapy.

The Occupational Therapy Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. AOTA's

phone number is (301) 652-AOTA. Graduates of the program will be able to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). Most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination.

3. Have a minimum of 3.0 GPA average based on a 4.0 scale in upper division courses of the bachelor's degree, or a combined score of 1000 (verbal and quantitative parts) on the Graduate Record Examination (GRE). All students are required to take the GRE. Admission is competitive and the average GPA is over 3.2 with a GRE of at least 1000.

4. Have a basic statistics course (STA 6166 Statistical Methods I is preferred).

5. Provide three letters of reference, a curriculum vitae/resume, a summary statement of professional and educational goals and assessment of current professional activities.

6. Receive approval from the departmental graduate admissions committee.

7. International students are accepted subject to space and fiscal limitations. Students must have a Bachelor's degree or equivalent in occupational therapy from an institution recognized in their own country as preparing students for graduate level study; academic eligibility for further study in their own country; demonstrate proficiency in the English language by a minimum score of 550 on the Test of English as a Foreign Language (TOEFL).

8. Students who must complete the professional certificate program must apply by January 15th for Summer B term admission. Registered Occupational Therapists are admitted continuously.

Degree Requirements

The Master of Science in Occupational Therapy consists of 36 credits including a thesis. Fifteen credits of core courses must be taken in the department plus a minimum of six credit hours of thesis.

A maximum of six credits of graduate coursework may be trans-

ferred from other institutions, subject to the approval of the departmental graduate committee.

Required Courses: (36)

Occupational Therapy Core

OTH 6009	Current Issues and Theories of Occupational Therapy	3
OTH 6265	Measurement and Assessment in Occupational Therapy	3
OTH 6215	Advanced Occupational Therapy Intervention Strategies	3
OTH 6948	Continuing Clinical Competence for Occupational Therapists	3

Research Core

STA 6167	Statistical Methods in Research II	3
OTH 5760	Current Research in Occupational Therapy	3
OTH 6970	Master's Thesis	6

Clinical Specialty Component

Combination of occupational therapy and university electives in an identified area of clinical interest approved by the faculty. 12

Occupational Therapy Certificate

The certificate program can only be taken concurrently with the Master of Science in Occupational Therapy. It is designed for the student who already holds a Bachelor's degree in a field other than occupational therapy. Students admitted to this program will apply to the occupational therapy department as graduate students.

The certificate curriculum will enable students to qualify for certification by the National Board for Certification in Occupational Therapy (NBCOT). Graduate students who hold a bachelor's degree in a field other than occupational therapy must complete this program.

Prerequisites

1. Biology and lab	3-4
2. Physiology (3 credits) or Anatomy/Physiology I and II with labs	6
<i>(Students who have completed Anatomy/Physiology I and II with labs have met the prerequisites for Biology with lab and Physiology).</i>	

3. Theories of Personality	3
4. Abnormal Psychology	3
5. Human Growth and Development	3
6. Statistics (STA 6166 Statistical Methods I preferred)	3
7. Human Anatomy with lab	4 ¹
8. Neuroscience	4 ¹

¹These courses must be numbered 3000 or above. If not taken as prerequisite, they may be taken after admission to the certificate program.

Required Courses: (53)

OTH 3351	Treatment Techniques in Psychiatric O.T.	1
OTH 3351L	Treatment Techniques in Psychiatric O.T.	2
OTH 3413	Applied Kinesiology	3
OTH 3413L	Applied Kinesiology Lab	1
OTH 3520L	Developmental Theory I Lab	1
OTH 4170L	Therapeutic Techniques	1
OTH 4210	Developmental Theory II	3
OTH 4315	Theory & Dysfunction in Psychiatric O.T.	2
OTH 4325	Evaluation & Treatment in Psychiatric Occupational Therapy	2
OTH 4325L	Evaluation and Treatment in Psychiatric Occupational Therapy Lab	1
OTH 4411	Pathology & Medical Surgical Disorders	3
OTH 4421	Biomechanics	2
OTH 4421L	Biomechanics Lab	1
OTH 4422	Evaluation & Treatment of Central Nervous Systems Dysfunction & Lab	3
OTH 4422L	Evaluation & Treatment of Central Nervous Systems Dysfunction & Lab	1
OTH 4714	Treatment Planning in Pediatrics	3
OTH 4761	Professional Issues	2
OTH 4850	Fieldwork Level II ¹	6
OTH 4851	Fieldwork Level II ¹	6
OTH 5162	Adaptation of Human Occupation	3
OTH 5031	Theories & Practice of O.T.	

OTH 5760	Current Research in O.T.	3
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¹Level II Fieldwork must be completed within 24 months of the didactic coursework.

Course Descriptions

Definition of Prefix

OTH - Occupational Therapy

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

OTH 5011 Theories and Practice of Occupational Theory (3). The theoretical foundations of occupational therapy and issues affecting professional practice. (SS)

OTH 5162 Adaptation of Human Occupation (3). Through development of an understanding of the components and nuances of human occupation, students will develop skills needed to promote optimal performance through simulation and adaptation of life tasks. (SS)

OTH 5174 Advanced OT Techniques in Upper Limb Prosthetics and Orthotics (3). Clinical OT techniques and pathomechanics applied to upper limb dysfunction including utilization of biofeedback and myoelectric components. Prerequisites: OTH 4421 and OTH 4170 (occasional elective).

OTH 5195 Occupational Therapy Job Modification (3). Analysis and adaptation of client's workplace for the disabled. Prerequisite: Admission to program or permission of instructor (occasional elective).

OTH 5213 Pediatric Seminar: School Based Occupational Therapy (3). Course designed to provide students with necessary skills and specific knowledge to practice occupational therapy effectively in the educational setting. One week fieldwork. Interdisciplinary classes with physical therapy. Prerequisite: Permission of instructor.

OTH 5214 Occupational Therapist Role in Family Centered Care (3). Course designed to orient O.T. students to family-centered care issues, such as legislation, cultural issues, family systems and empowerment strategies, in order to prepare them for clinical practice. Prerequisite: Permission of instructor.

OTH 5326 Psychiatric O.T.: Contemporary Theory and Practice (3). Examination of contemporary

knowledge relevant to the theory and practice of O.T. in psychiatry. Prerequisite: Admission to Program or permission of instructor.

OTH 5345 Occupational Therapy Program Development in Psychiatry (3). Seminar discussion and practical experience in OT programming in psychiatry. Prerequisite: Admission to program or permission of instructor.

OTH 5405C Analysis of Therapeutic Procedures in Physical Disabilities (3). A lecture/lab course designed to introduce advanced students to theory based assessment problem identification and treatment for the physically disabled adult.

OTH 5406 Sensory Problems and Therapeutic Implications (3). An in-depth study of sensory problems and the implications for therapy. A variety of patient populations and clinical applications will be discussed. Prerequisite: Graduate standing or permission of instructor (occasional elective).

OTH 5407 Theoretical Perspectives of Pain (3). Theoretical perspectives of pain: etiology, assessment, management and effects. Prerequisite: Admission to the program or permission of instructor (occasional elective).

OTH 5440 Treatment Approaches for the Neurologically Impaired (3). In depth instruction in approaches to the neurologically impaired patient. Emphasis will be on dysfunction due to stroke or head injury. Prerequisite: OTH 4422 or equivalent.

OTH 5503 Current Occupational Therapy Practice in the Neonatal Intensive Care Unit (3). Theoretical framework and guidelines for assessment and intervention in a neonatal intensive care unit. Prerequisite: Majors only.

OTH 5600 Study of Gerontology as Related to Occupational Therapy (3). An overview of current issues in the practice of occupational therapy for the aged.

OTH 5613 Interdisciplinary Approach to Aging (3). Issues related to roles of specific health team members and application of interdisciplinary approach to care of the elderly. Prerequisite: Aging course or work experience with elderly, permission of instructor.

OTH 5630 OT Assessment of the Elderly (3). Study of assessment tech-

niques appropriate for OT evaluation of the elderly. Prerequisite: Admission to program.

OTH 5751 Rehabilitation Seminar in Occupational Therapy (3). A seminar designed to gain an understanding of OT clinical practice areas in rehabilitation. Various clinicians will present their perspectives of organizational structure, populations served, evaluation and treatment approaches. Prerequisite: Permission of instructor.

OTH 5760 Current Research in Occupational Therapy (3). Review of statistical concepts and research procedures in the clinical setting, with in-depth study of the current status of research in occupational therapy. (S)

OTH 5764 Research in a Clinical Speciality (3). Participation in ongoing research of faculty members in clinical speciality area. Prerequisite: Permission of instructor. (SS)

OTH 5805 Service Learning in Health (3). Student's learning is centered on a community service experience which meets specific principles of service learning. Prerequisite: Admission to graduate study in OT. (Other graduate students or graduate certificate students in aging admitted by permission of instructor.)

OTH 5905 Independent Study (Variable Credit). (F,S,SS)

OTH 5934 Evaluation and Treatment of Hand Dysfunction (3). Seminar in current issues related to the assessment and treatment of common injuries of the hand (occasional elective).

OTH 6009 Current Issues and Theories of Occupational Therapy (3). Exploration of current issues and theories in occupational therapy leading to development of student's theoretical reference for practice. Prerequisite: Admission to the program.

OTH 6215 Advanced OT Intervention Strategies (3). Principles and characteristics of treatment regimens designed to enhance the study of treatment effectiveness. Emphasis on application of activity appropriate for student's clinical concentration. Prerequisite: Admission to program. (F)

OTH 6265 Measurement and Assessment in Occupational Therapy (3). Measurement concepts and prac-

tices used in occupational therapy evaluation. Prerequisite: Admission to program or permission of instructor.

OTH 6507 Occupational Therapy for Occupationally Dysfunctional Children & Adolescents. Exploration of factors leading to successful adaptation to occupational roles, are explored with particular emphasis on the relationship between these factors and Occupational Therapy theory. Prerequisite: Permission of instructor.

OTH 6538 Advanced Methods in Pediatric Assessment (3). Advanced applications of theory and research in the area of pediatric occupational therapy assessment. Skills in neonatal, neurodevelopmental, occupational behavior, and computer-assisted methods.

OTH 6542 Role of the Occupational Therapist in the School System: A Consultation Model (3). Course introduces consultation as a viable service provision option to enable occupational therapists to create more effective living and learning environments in behalf of children. Prerequisite: Permission of instructor.

OTH 6546 Resources and Skills for the PH/PT Student (3). This course focuses on the interdisciplinary team that works for the optimum educational benefit of the student. Therapists and teachers will learn and work collaboratively within this course. Corequisites: Graduate OT, PT, or Education students.

OTH 6547 Strategies for the PH/PI Student (3). This course focuses on the use of available technology (both high and low tech) to enhance the instructional strategies for profoundly handicapped and physically impaired student populations. Corequisites: Graduate OT, PT, or Education students.

OTH 6548 Advanced Methods in Pediatric Occupational Therapy (3). Advanced application of theory and research in occupational therapy. Includes neurodevelopmental treatment approaches, neonates through adolescents. Prerequisite: OTH 6538.

OTH 6948 Continuing Clinical Competence for Occupational Therapists (3). Design, execution, and presentation of a major Occupational Therapy project.

OTH 6970 Master's Thesis (1-6). Supervised research on a research project submitted in partial fulfillment of Master's degree requirement. Prerequisite: Permission of major professor. (F,S,SS)

Physical Therapy

Awilda R. Haskins, Associate
Professor and Chairperson

Jacques Augustin, Assistant Professor

Steven Bernstein, Assistant Professor

Helen Z. Cornely, Assistant Professor

Burton J. Dunevitz, Associate
Professor

Leonard Elbaum, Associate Professor

Edith Einspruch, Assistant Professor
and Clinical Coordinator

Lori Gusman, Clinical Assistant
Professor

Joyce Maring, Clinical Assistant
Professor

Colleen Rose-St. Prix, Assistant
Professor

Master of Science in Physical Therapy

The Master of Science in Physical Therapy is designed to enable physical therapists to pursue attainment of a specialty practice area through advanced education in their chosen profession. It is also designed to enhance the research, administrative and/or educational knowledge and skills of physical therapists.

The curriculum is comprised of three basic components: physical therapy courses designed to increase understanding of the theoretical basis and current issues of physical therapy practice; a research sequence designed to improve the physical therapist's ability to engage in research; and graduate level elective courses which will allow the physical therapist to obtain additional skills and knowledge in the areas of gerontology, health services administration, education, or other approved area of interest.

The program permits part-time as well as full-time study. The physical therapist who elects to complete the program on a full-time basis can complete the physical therapy coursework in four full semesters. All degree requirements must be completed within six years of the initial admission into the program.

The goals of the program are to:

1. Provide physical therapists with skills to enable them to function effectively in specialized clinical settings, research programs, educational programs and/or supervisory positions.

2. Prepare individuals who will contribute to the promotion of health in the community through

the application of scientific principles of human movement to include identification, prevention, assessment and correction of acute or chronic movement dysfunction.

3. Provide physical therapists whose skills and knowledge are commensurate with the expanding need for health care services in South Florida, as well as the rest of the state, nation and international community.

Admission Requirements

Applicants to the program must meet the minimum standards set forth by the Florida Board of Regents and the University in addition to the Departmental requirements to include:

1. Bachelor's degree or the equivalent from an accredited institution.

2. Graduate of an accredited entry level physical therapy program.

3. One official copy of all college/university transcripts.

4. A minimum grade point average of 3.0 based on a 4.0 scale (upper division) or a combined score of 1000 (verbal and quantitative parts) on the Graduate Record Exam (GRE).

5. A minimum of three letters of recommendation to include one from each of the following persons: a college or university professor; a physical therapist; a current or past employer.

6. Submission of a curriculum vita/resume.

7. Submission of a summary statement of professional and educational goals and assessment of current professional activities (attached to resume).

8. Licensed to practice physical therapy in the state of Florida or other jurisdiction.

9. Approval from the departmental graduate admissions committee.

10. An applicant who fails to meet the regular admissions criteria may apply to be considered under the Board of Regents' 10% waiver policy (up to 10% of graduate students can be admitted in any one year as exceptions to the regular policy).

11. Graduates of non-U.S. institutions must be academically eligible for further study in the country where the degree was earned. If the applicant's native language is not English, the applicant must demonstrate

proficiency in the English language by presenting a score of 550 or higher on the Test of English as a Foreign Language (TOEFL).

Degree Requirements

The Master of Science in Physical Therapy consists of 36 credits including thesis. Fifteen credits of graduate level physical therapy courses and an advanced physical therapy research course must be taken. Additional required courses include a minimum of six graduate credits of out-of-department electives, an approved graduate level research course, and a graduate level statistics course. The out-of-department electives will be determined by the student in conjunction with his or her physical therapy advisor.

A maximum of six credits of graduate work may be transferred from other institutions, provided they are approved by the departmental graduate committee and are in compliance with the University's graduate policies and procedures.

A maximum of 12 credits earned as a non-degree seeking student at the University may be accepted by the program, provided they are approved by the Departmental graduate committee and are in compliance with the University's graduate policies and procedures.

Required Courses: (36)

All students accepted to the graduate program will develop individualized programs of study. The program of study must be approved by the physical therapy advisor and by the departmental graduate committee.

Physical Therapy Courses

Approved Physical Therapy courses 15

Research Component

STA 5126	Fundamentals of Design of Experiments	3
	or	
STA 6166	Statistical Methods in Research I	
PHT 6625	Advanced Physical Therapy Clinical Research Methodologies and Design	3
PHT 6971	Master's Thesis	6

Electives

Approved out-of-department graduate level electives	6
Approved out-of-department graduate level research course	3

Course Descriptions

Definition of Prefixes

PHT - Physical Therapy

PHT 5045 Applied Educational Theory in Physical Therapy (3) The application of teaching and learning principles to Physical Therapy patient education, student clinical education, and continuing education. A variety of teaching methodologies will be practiced by participants.

PHT 5328 Advanced Pediatric Physical Therapy Assessment (3). Analysis of assessment tools in relation to treatment. Competence in administration of appropriate tools will be required at end of course. Prerequisites: Either STA 5126 or STA 6166 and permission of instructor.

PHT 5335 Physical Therapy in Obstetrics/Gynecology (3). This course will explore the role of the therapist in the field of obstetrics and provide and introduction to gynecological issues. Emphasis will be on evaluation and treatment of the OB client. Prerequisite: Permission of instructor.

PHT 5336 Theories in Cardiopulmonary Rehabilitation (3). This course is designed to provide students with applied theory in the clinical and physical therapy management of medical and surgical cardiac and respiratory conditions. Prerequisite: Permission of instructor.

PHT 5373 Advanced Therapy Assessment of the Elderly (3). The study of assessment tools used in geriatric rehabilitation in relation to appropriate intervention strategies and research findings. Prerequisites: Appropriate adult motor development course/permission of major advisor.

PHT 5515 Therapeutic Services for Physically Impaired and Mentally Retarded Students (3). Lecture, lab, and group work to develop skills of education and therapy professionals for implementation with disabled children in schools. Prerequisite: Permission of major advisor or instructor.

PHT 5639 Physical Therapy Administrative Techniques and Methods (3). Provides an in-depth view of the health care industry and its relationship to the P.T. profession. Management techniques in all areas will be presented with emphasis on planning and financial management.

PHT 5815 Clerkship in Physical Therapy (2). Two-week full-time clinical

experience combined with independent study of question or issue in clinical Physical Therapy. Prerequisite: Permission of major advisor.

PHT 6127 Advanced Pathologic Movement Analysis (3). Explores the abnormal gait and movement patterns as they relate to pathologic states involving either the musculoskeletal or the neurologic system, or both. Prerequisite: Permission of major advisor.

PHT 6165 Applied Clinical Neuroanatomy (3). Examines correlation of sites of pathology in the central and peripheral nervous systems with actual patients; their signs and symptoms, their regimen of treatment, and prognosis for rehabilitation. Prerequisites: Neuroanatomy and permission of major advisor.

PHT 6237 Environments/Energy Expenditures of the Disabled (3). Analysis of the home and work settings in relation to various forms of physical disabilities. Energy expenditures pertaining to environmental factors as they pertain to physical therapy evaluation and treatment. Prerequisite: Permission of major advisor.

PHT 6238 Motor Development: Adult Through Geriatrics (3). A study of motor development of the adult through old age. Application of developmental principles to physical therapy practice and research. Prerequisite: Permission of major advisor.

PHT 6239 Developmental Disabilities in Adulthood (3). A study of adults with developmental disabilities; including aspects of societal perspectives, political and public policy regarding the handicapped, and current theories in treatment of the handicapped adult population. Prerequisite: Permission of major advisor and instructor.

PHT 6325 Advanced Clinical Pediatric Physical Therapy (3). The study of theory, treatment and current clinical research in pediatric physical therapy practice. Prerequisite: Permission of major advisor and PHT 5320.

PHT 6326 Physical Therapy for At-Risk Infants (3). This course will explore current PT practice and research for at-risk infants in NICU, NCCU, and follow-up programs. Includes aspects of physiological and behavioral monitoring indicators for physical therapy intervention. Prerequisite: PT graduate students.

PHT 6365 Theories in Sports Physical Therapy (3). Study and exploration of relevant issues in sports physical therapy. Focus on problem identification, investigation, analysis, and problem solving approaches. Prerequisite: Permission of major advisor.

PHT 6625 Advanced Physical Therapy Clinical Research Methodologies and Design (3). Exploration of scientific method and theory as applied to clinical and experimental research in physical therapy; includes method of inquiry, techniques of data collection, organization, and interpretation. Prerequisites: STA 5126 or STA 6166 and permission of major advisor.

PHT 6714 Spinal Dysfunction I (Lower Back) (3). In-depth exploration of the evaluation and treatment of various lumbar spine dysfunctions. Prerequisite: Permission of major advisor.

PHT 6715 Spinal Dysfunction II (Upper Back) (3). In-depth exploration of the evaluation and treatment of various cervical spine dysfunctions. Prerequisite: Permission of major advisor.

PHT 6716 Theories in Orthopedic Physical Therapy (3). Study and exploration of relevant issues in orthopedic physical therapy. Focus on problem identification, investigation, analysis, and problem solving approaches. Prerequisite: Permission of major advisor.

PHT 6718 Theories in Neuro rehabilitation (3). Examines theoretical bases of evaluation and treatment of the neuro-patient; includes exploration of the relationship of motor control and motor learning to current neurologic rehabilitation. Prerequisite: Permission of major advisor.

PHT 6725 Extremity Evaluation and Rehabilitation (3). In-depth exploration, critical analysis, and investigation of joint and extremity dysfunctions. Prerequisite: Permission of major advisor.

PHT 6845 Resources and Skills for the PT/PI student (3). This course focuses on the interdisciplinary team that works for the optimum educational benefit of the student. Therapists and teachers will learn and work collaboratively within this course. Corequisite: Graduate OT, PT, or Education students.

PHT 6905 Independent Study (1-3). Individually determined, research-

oriented, in-depth study of a physical therapy issue. An independent study contract must be approved by the instructor. Prerequisite: Permission of major advisor and instructor. Must be fully admitted to the graduate program.

PHT 6971 Master's Thesis (1-3). Supervised research which demonstrates the application of analytical, conceptual and technical skills to a specific physical therapy problem. Prerequisite: Permission of major advisor.

Public Health

H. Virginia McCoy, *Associate Professor and Chairperson*
William W. Darrow, *Professor*
Janvier Gasana, *Assistant Professor*
William J. Keppler, *Professor*
Joseph Patterson, *Professor Emeritus*
Richard T. Patton, *Instructor*,
Coordinator of Field Experience
Patti R. Rose, *Assistant Professor*
Robert R. Stempel, *Associate Professor*

Master of Public Health

The Master of Public Health is an affiliated program offered with the Department of Epidemiology and Public Health at the University of Miami's School of Medicine. The program is accredited by the Council on Education for Public Health.

The program is designed to provide fundamental skills in core areas of Public Health to persons involved in the policy development, planning, and implementation of community health services; and to serve those seeking a broader base of knowledge to improve environmental and personal health services for the community. This program prepares the practicing professional in the diverse fields of community health.

The mission of the Department of Public Health at Florida International University is to educate, train, and serve the interests of Public Health. In fulfilling this mission, the Department will:

- educate and train health professionals;
- promote health maintenance and disease prevention;
- conduct research and disseminate useful information;
- serve the health needs of minorities, the underserved and all the people of South Florida;
- emphasize our geographical location to the Caribbean and Latin America.

Admission Requirements

Applicants must meet the University's general graduate admission requirements:

1. A bachelor's degree or equivalent from an accredited college or university or, in the case of foreign students, an institution recognized in its own country as preparing students for further study at the graduate level, and submit a score of 500 on the TOEFL.

2. A minimum 3.0 GPA (on the last 60 undergraduate hours), or a combined quantitative and verbal score of 1000 on the GRE taken within the last five years; or a score of 500 on the GMAT; or a graduate degree from an accredited institution. However, all applicants, regardless of previous GPA, are required to submit the appropriate aptitude test scores. In addition, applicants are required to 1) submit three letters of recommendation from persons in the field of public health and the academic major at the institution most recently attended; 2) submit a written personal statement as described in the application packet provided by the Department of Public Health; 3) provide a current curriculum vitae/ resume.

Students with diverse backgrounds are encouraged to apply; relevant work experience will be given strong consideration.

Computer Requirements

Entering students must demonstrate basic computer literacy, either through coursework or by demonstration to the advisor. Students are expected to show that they can load and run software programs, and have reasonable proficiency in word processing. Two core courses, PHC 6715 Survey Research in Public Health and PHC 6050 Public Health Statistics, require use of SPSS. This requirement will assure that students are prepared for these and other courses which require additional computer skills needed in public health practice.

Masters Culmination

All MPH students must complete either a field-training experience or master's research as general core course requirement.

Field Experience Option

This option is recommended for all students with less than three years of experience in a health-oriented program. Field experience gives the student the opportunity to gain practical experience under preceptor-guided supervision in public health. Students should consult the Field Experience Coordinator for further information.

Research Options

These options are recommended for students entering the program with three or more years of experience in a health-related program.

Masters Research Project

The research project affords the opportunity to conduct research on a specific public health problem or topic in either a community or institutional setting. MPH students who select the research project must choose a faculty member to direct their research. The advisor and the student may identify other resource persons to serve in an advisory capacity for the research project.

Masters Thesis

The thesis option provides students the opportunity to conduct original research on a public health problem or topic and to report this in a scholarly manuscript. Students who select this option must choose a major professor to act as the chair of their thesis committee and two additional members. Before beginning work on a thesis, student must present a proposal to their committee for approval. The committee will direct and supervise the work carried out by the student.

Degree Requirements

Students must complete at least 45 semester hours of approved coursework with a minimum of a 'B' average. All work applicable to the degree must be completed within six years immediately preceding the awarding of the Master's degree.

Program of Study

The course of study is designed to allow students to concentrate in one of four areas:

Environmental Health Management
Epidemiology
Health Promotion
Public Health Policy and Administration

Coursework in each area includes: General Core Courses (18 semester hours); Supervised Field Experience or Master's Research Project (3-6 semester hours); Concentration Core (12-15 semester hours); Concentration Electives (6-9 semester hours).

General Core Courses: (18)

PHC 6000	Introduction to Public Health Epidemiology	3
PHC 6050	Public Health Statistics	3
PHC 6315	Public Health and Environmental Management	3
PHC 6410	Health Behavior and Public Health	3
PHC 6500	Foundations of Public Health Practice	3

PHC 6715	Survey Research in Public Health	3
Field Experience or Research: (3-6)		
PHC 6945	Supervised Field Placement	3-6
	or	
PHC 6977	Master's Research Project	3-6
	or	
PHC 6xxx	Master's Thesis	3-6

Specific concentrations for the Master of Public Health are divided into four major areas:

Environmental Health Management Concentration

Prepares professionals to utilize technical data, decision-making theory, managerial methods, socio-legal issues, and risk assessment in the development and implementation of public policy, environment standards, and environmental protection programs.

(Offered in cooperation with the Department of Civil and Environmental Engineering)

Required Courses: (12)

PHC 6355	Public Health and Occupational Health and Safety	3
PHC 6356	Public Health and Industrial Hygiene	3
PHC 6311	Environmental Health Risk Assessment	3
PHC 6004	Injury Epidemiology and Prevention	3

Concentration Electives: (9)

PHC 6443	Ethical Issues in Public Health	3
PHC 6425	Legal and Regulatory Aspect of Environmental Health	3
PHC 6307	Environmental Health Monitoring	3
PHC 6150	Public Health Policy Analysis and Formulation	3
PHC 6501	Health Promotion Communication Theory and Design	3
PHC 6503	Community Organization for Health Promotion	3
PHC 6520	Public Health Aspects of Foodborne Diseases	3
PHC 6539	Health Demography	3
HSA 6176	Financing and Reimbursement of Health Systems	3

General Electives (3)

Epidemiology Concentration

Epidemiology is the study of the distribution of diseases in the community and the factors influencing or determining this distribution.

Required Courses: (12)

PHC 6016	Social Epidemiology Health Promotion and Policy	3
PHC 6539	Health Demography	3

(Additional courses will be taken in affiliation with the University of Miami, School of Medicine)

Concentration Electives: (9)

PHC 6538	Genetic Issues in Public Health	3
PHC 6443	Ethical Issues in Public Health	3
PHC 6004	Injury Epidemiology and Prevention	3
PHC 6009	AIDS Epidemiology and Control	3
PHC 6012	Current Research in Epidemiology	
PHC 6014	Behavioral Epidemiology	3
PHC 6015	Epidemiological Methods	3
PHC 6115	International Public Health	3
PHC 6907	Independent Study: Public Health	1-3
PHC 6503	Community Organization for Health Promotion	3
PHC 6530	Principles of Maternal and Child Health	3

General Electives (3)

Health Promotion Concentration

This concentration area is concerned with personal and public health lifestyles, identification of risk factors and behavioral change strategies that promote positive health behaviors of the individual, family and community.

It prepares individuals for leadership positions in the development and implementation of health promotion/health education programs in community health agencies, work-sites, schools, hospitals, and other health care settings.

Required Courses: (15)

PHC 5415	Public Health in Minority/Urban Populations	3
PHC 6504	Introduction to Health Education and Wellness	3

PHC 6501	Health Promotion Communication Theory and Design	3
PHC 6503	Community Organization for Health Promotion	3
PHC 6750	Program Development and Evaluation in Health Promotion	3
Concentration Electives: (6)		
PHC 6589	Health Promotion in Institutional Settings	3
PHC 6443	Ethical Issues in Public Health	3
PHC 6160	Public Health Budgeting	3
PHC 5409	Public Health Behavior Change Theory and Practice	3
PHC 6016	Social Epidemiology, Health Promotion and Policy	3
PHC 6150	Public Health Policy Analysis and Formulation	3
PHC 6311	Environmental Health Risk Assessment	3
PHC 6530	Principles of Maternal and Child Health	3
PHC 6580	Health Promotion in the Clinical Settings	3

General Electives: (6)**Public Health Policy and Administration Concentration**

Emphasis is on health policy analysis and primary care administration in various health care settings.

Required Courses: (12)

PHC 6160	Public Health Budgeting	3
PHC 6111	Primary Health Care Strategies	3
PHC 6150	Public Health Policy Analysis and Formulation	3
URS 6028	Policy Analysis and Program Planning	3

Concentration Electives: (6)

PHC 6589	Health Promotion in Institutional Settings	3
PHC 6443	Ethical Issues in Public Health	3
HSA 5225	Long Term Care Management	3
HSA 6149	Strategic Planning and Marketing of Health Care Services	3
HSA 6176	Financing and Reimbursement of Health Systems	3

HSA 6187	Personnel Management and Labor Relations	3
PHC 6425	Legal and Regulatory Aspects of Environmental Health	3
PHC 6503	Community Organization for Health Promotion	3
PHC 6530	Principles of Maternal and Child Health	3
PHC 6539	Health Demography	3
General Electives (6)		

Course Descriptions**Definition of Prefix**

PHC - Public Health

PHC 5409 Public Health Behavior Change Theory and Practice (3). A course for health promotion practitioners who lack formal training in behavior change foundations and strategies. The course emphasizes applications to practical development of health promotion interventions.

PHC 5415 Public Health in Minority/Urban Population (3). Covers the scope of Public Health Issues related to minority and urban populations with an emphasis on health care status, utilization of the health care system and expenditures.

PHC 6000 Introduction to Public Health Epidemiology (3). Introduction to the study of the distribution, determinants, and measurement of health and disease in populations, including study methods and their application to specific diseases and conditions. (F,S)

PHC 6004 Injury Epidemiology and Prevention (3). Analyzes the impact and extent of injuries as a public health problem. Issues of prevention, sources of data, environment, social and occupational aspects are included in an epidemiological approach. Prerequisite: PHC 6000. (SS)

PHC 6009 AIDS Epidemiology and Control (3). Reviews the epidemiology, virology, immunology, and clinical aspects of HIV, and also examines its impact upon risk groups and the responses of society to the epidemic. (S)

PHC 6012 Current Research in Epidemiology (3). This course will examine current areas of research in epidemiology and bring students

into contact with researchers in various fields. Prerequisite: PHC 6000. (S)

PHC 6014 Behavioral Epidemiology (3). This course will examine human behaviors as determinants of health and disease, methods of exploring these relationships, and ways of altering risk behaviors. Prerequisite: PHC 6000.

PHC 6015 Epidemiological Methods (3). This course will examine epidemiological methods emphasizing the actual conduct of studies. Students will undertake a simulated research project. (S)

PHC 6016 Social Epidemiology, Health Promotion and Policy (3). Explores the epidemiological aspects of health and medical care of the poor and disadvantaged population groups. Emphasis on the relationship of organization and delivery of health care, including health promotion, prevention, and related topics. Prerequisite: PHC 6000. (F)

PHC 6050 Public Health Statistics (3). An introduction to the basic principles of inferential statistics as applied to public health. The course includes those components of biometry routinely used in public health. Prerequisite: Undergraduate course in statistics. Open only to graduate students in Public Health. (F,S)

PHC 6111 Primary Health Care Strategies (3). Examines the rationale, planning and implementation of community-oriented primary health care. Emphasizes primary care as an integral part of the health care system and an essential part of public health. Prerequisites: PHC 6500 or permission of instructor. (SS)

PHC 6112 Health Risk Appraisal (3). Health promotion technique designed for identifying personal health risks and the use of these methodologies for inducing behavioral change. Evaluation of the effectiveness of various health appraisal instruments. Prerequisite: PHC 6000 & PHC 6050. (F)

PHC 6115 International Public Health (3). This course describes international differences in the distribution and determinants of disease and health, and examines interventions aimed at improving health status. (F)

PHC 6150 Public Health Policy Analysis and Formulation (3). Strategies for formulating public health policy;

political processes; resource allocation, organization, and participation. Examination of current policy issues and efforts to effect change. (F)

PHC 6160 Public Health Budgeting and Financial Management (3). This course is designed for public health practitioners. Emphasis will be placed on models necessary to develop operational budgets in the public sector of health care and to anticipate financial anomalies.

PHC 6307 Environmental Health Monitoring (3). Surveys available mechanisms utilized by public health and environmental agencies to monitor levels of pollution, environmental quality, and change in environmental conditions which impact human health. Prerequisite: PHC 6000, PHC 6050, PHC 6315. (SS)

PHC 6311 Environmental Health Risk Assessment (3). This course explores environmental health care management problems associated with risk to the population from exposure to particular agents and conditions. Emphasizes practical problems in risk estimation through the case method approach. Prerequisite: PHC 6315. (S)

PHC 6315 Public Health and Environmental Management (3). An overview of public health philosophy and government organization in the provision of official agency, environmental, and preventive medicine services, with particular emphasis on the regulatory and surveillance responsibilities authorized in the public sector. (F,S)

PHC 6355 Occupational Health and Safety (3). The course covers recognition of occupational hazards, injuries and diseases and the principles of occupational safety including safety regulations and standards and models of accident causation. Prerequisite: PHC 6315.

PHC 6356 Fundamentals of Industrial Hygiene (3). The course covers recognition, evaluation, and control of chemical biological and physical agents in the workplace; application to exposure, control measures, and standard setting procedures. Prerequisite: PHC 6315.

PHC 6410 Health Behavior and Public Health (3). The overall goal of this course is to introduce the student to the learning and behavioral science theories that provide the framework for the practice of health promotion

and public health. Prerequisites: Public Health major or permission of instructor. (F,S)

PHC 6425 Legal and Regulatory Aspects of Environmental Health (3). The application of law as it relates to the environment and human health. Legal process and rule-making; cost-benefit analysis; judicial review; evidentiary problems; and other elements of environmental law are emphasized. Prerequisites: PHC 6000, PHC 6050 and PHC 6315. (S)

PHC 6500 Foundations of Public Health Practice (3). Philosophy, nature, and scope of public health; organization and administration; principles of disease prevention and health promotion; current issues and trends; socioeconomic and political forces. Prerequisite: Public Health major or permission of instructor. (F,S,SS)

PHC 6501 Health Promotion Communication Theory and Design (3). Theory, design, and implementation of health education communication utilized in reaching the public. Emphasis on the critical analysis of the communication processes; group techniques and media methods; and the consultation process. Prerequisite: Health Promotion Concentration or by permission of instructor. (F)

PHC 6502 Health Promotion in the Workplace (3). Emphasis is on program design, management, and evaluation of health promotion in industry. Current issues on health assessment, fitness, and emotional stress in the workplace will be considered. Prerequisite: Health Promotion Concentration or permission of instructor. (SS)

PHC 6503 Community Organization for Health Promotion (3). Emphasis is on the diagnosis of community health problems and various organizational strategies utilized for effective solution. Review and analysis of community organization process; resources; and the role of health promotion specialist. Prerequisite: Health Promotion Concentration or permission of instructor. (F)

PHC 6504 Introduction to Public Health Education and Wellness (3). Primarily intended to introduce graduate students to concepts and principles underlying the use of Public Health and Behavioral Strategies to positively influence behavioral

patterns. Prerequisites: Public Health major or permission of instructor.

PHC 6520 Public Health Aspects of Foodborne Diseases (3). Examines the scope of the foodborne disease problem; factors that contribute to outbreak of foodborne disease; strategies for the prevention and control of these diseases are explored. Prerequisites: PHC 6000, PHC 6050, and PHC 6315. (F)

PHC 6530 Principles of Maternal and Child Health (3). Covers the scope of the field of maternal and child health with emphasis on the needs of infants, children, youth, women and families in the reproductive cycle and programs designed to meet these needs. Prerequisite: Public Health major or permission of instructor. (S)

PHC 6538 Genetic Issues in Public Health (3). Genetic issues and topics that impact on Public Health will be covered such as HW gene frequencies and HUGO. A public health perspective with a field of study.

PHC 6539 Health Demography (3). The study of basic population structure, composition, trends and relationship to health status. Implications of demographic trends, policies for public health; population growth, immigration, infant mortality. Prerequisites: PHC 6050 or permission of instructor. (S)

PHC 6580 Contemporary Issues in Health Promotion (3). Current problems and findings in health promotion content areas such as smoking, alcohol, and drug misuse, family health, safety, physical fitness, communicable and chronic diseases will be discussed. Prerequisites: PHC 6000 and PHC 6050. (SS)

PHC 6585 Health Promotion in Clinical Settings (3). Analysis of the role, methods, and techniques of health promotion and patient education pertaining to hospitals, clinics and other ambulatory health services. Prerequisites: PHC 6000 and PHC 6050. (S)

PHC 6589 Health Promotion in Institutional Settings (3). This course will investigate the role, methods and techniques used to promote health in diverse settings such as clinic and community agencies, schools, universities and workplaces.

PHC 6715 Survey Research in Public Health (3). Health survey design, analysis and implementation, and In-

terpretation of data. Emphasis on practical aspects of conducting health surveys. Study of existing health surveys. Prerequisites: PHC 6000 and PHC 6050. (F,S)

PHC 6750 Program Development and Evaluation in Health Promotion (3). Principles and procedures in health promotion program development and evaluation. Emphasis on needs assessment, planning models, evaluation designs, data collection, analysis and reporting. Prerequisites: PHC 6000 and PHC 6050. (F)

PHC 6907 Independent Study: Public Health (1-3). Allows student investigations of special topics and issues utilizing literature searches, analysis, or active performance in public health settings under the direction of faculty supervision. Prerequisite: Permission of the faculty advisor.

PHC 6945 Supervised Field Experience in Public Health (3). Preceptor guided experience in a public health organization. Experience will include orientation; observation; and participation in the aspects of the agency's program. Prerequisite: Permission of the faculty advisor.

PHC 6977 Master's Research Project (3). This course provides the student with an opportunity to explore in-depth a specific topic or issue of interest in public health.

PHC 6xxx Masters Thesis (1-6). Supervised research on an original public health problem or topic submitted in partial fulfillment of master's degree requirement. Prerequisite: Permission of major professor. (F,S,SS)

PHC 7702 Advanced Measurement in Public Health (3). Advanced course in measurement and evaluation in public health. Computer applications for public health practice emphasized. Prerequisites: PHC 6050, PHC 6715, PHC 6750.

Graduate Certificate Program in Health Promotion

The Graduate Certificate Program seeks to provide graduate level instruction in health promotion to non-graduate-degreed practitioners. Students will gain a scientific foundation for designing, conducting, and evaluating health promotion programs in public health, while at the same time benefit from numerous opportunities for practical application.

Program Requirements

The Graduate Certificate Program requires completion of 15 graduate credits. The student must demonstrate proficiency in health promotion design, implementation, and evaluation. If students are proficient in any one area covered by the required courses, alternative courses may be selected. Substitution of courses must be approved by the advisor. A graduate statistic course (biostatistics, social statistics) is a prerequisite.

Students should consult with advisors since new courses are frequently added, and some courses have prerequisites and enrollment stipulations.

Required Courses¹: (15)

PHC	Introduction to Health Education and Wellness	3
PHC 6409	Public Health Behavior Change Theory and Practice	3
PHC 6501	Health Promotion Communication Theory and Design	3
PHC 6750	Program Development and Evaluation in Health Promotion	3
PHC 6589	Health Promotion in Institutional Settings	3

¹If students are proficient in any one area covered by the required courses, the following alternative courses may be substituted (6 credits maximum):

PHC 6112	Health Risk Appraisal
PHC 7702	Advanced Measurement in Public Health
PHC 6531L	Environmental Health Risk Assessment
PHC 6004	Injury Epidemiology and Prevention
PHC 6520	Public Health Aspects of Foodborne Diseases
PHC 6580	Contemporary Issues in Health Promotion

PHC 6530	Principles of Maternal and Child Health
PHC 6016	Social Epidemiology, Health Promotion, and Policy
PHC 5415	Public Health in Minority/Urban Populations

Admission Requirements

Applicants must hold a bachelor's degree or equivalent from an accredited college or university.

Graduation (completion) Requirements

Completion of 15 graduate credits with an overall 'B' average.

College of Health

Dean, (Acting) Judith A. Blucker
Associate Dean Evelyn B. Enrione
Assistant Dean Anthony Cruz

Chairpersons and Directors:

Dietetics and Nutrition Susan P. Himburg
Health Information Management Maha Yunis
Medical Laboratory Sciences Beverly A. Warden
Occupational Therapy (Acting) Pamela Shaffner
Physical Therapy Awilda R. Haskins
Public Health Virginia McCoy

Faculty

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Occupational Therapy

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Medical Laboratory Sciences

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Bloch, Elise, M.Ed., O.T.R. (Queens
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Brenner, Mary, M.S., R.D. (Florida
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Cornely, Helen Z., M.S., P.T. (Nova
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Physical Therapy

Culver, Charles M., M.D., Ph.D.,
Courtesy Professor

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Nutrition

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Courtesy Assistant Professor

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Therapy

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Professor, Physical Therapy

Enrione, Evelyn B., Ph.D., R.D.
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Professor, Dietetics and Nutrition,
and Associate Dean

Fernandez, Jose, R. M.D., Courtesy
Assistant Professor

Gasana, Janvier, M.D., Ph.D.
(University of Illinois), Assistant
Professor, Public Health

George, Valerie, Ph.D. (Université
Laval), Assistant Professor,
Dietetics and Nutrition

Gusman, Lori, M.S., P.T. (Florida
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Therapy

Haskins, Awilda R., Ed.D., P.T.
(Florida International University),
Associate Professor and
Chairperson, Physical Therapy

Hills, Gail A., Ph.D., O.T.R., F.A.O.T.A.
(University of Maryland),
Professor, Occupational Therapy

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of Illinois), Professor, Public Health

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Sciences

Magnus, Marcia H., Ph.D. (Cornell
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Malecki, Jean, M.D., MPH, Courtesy
Professor

Maring, Joyce R., M.S., P.T. (Boston
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Professor, Physical Therapy

Martinez, Odalys, B.S., R.R.A. (Florida
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Management

McCoy, Virginia, Ph.D. (University of
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and Chairperson, Public Health

Mills, James L., M.H.A., M.S.E.D.,
O.T.R. (University of Southern
California), Clinical Associate
Professor, Occupational Therapy

O'Hara, Peggy, Ph.D., Courtesy
Professor

Patterson, Joseph, Dr. P.H. (University
of California at Los Angeles),
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Patton, Richard, M.P.H., R.D.
(University of North Carolina),
Instructor, Public Health

Rose, Patil R., Ed.D. (Columbia
University), Assistant Professor,
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Rose-St. Prix, Colleen, MHSA, P.T.
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Therapy

Scott, Patricia, M.P.H., O.T.R.
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Occupational Therapy

Stakianari, Eleni, M.D., MSPH,
Courtesy Professor

Shaffner, Pamela, M.S., O.T.R. (Nova
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and Acting Chairperson,
Occupational Therapy

Shen, Patrick F., Ph.D., M.T. (ASCP)
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Laboratory Sciences

Smith, Sylvia L., Ph.D., S.M. (AAM,
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Professor, Medical Laboratory
Sciences

Stempel, Robert, Dr. P.H. (University
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Professor, Public Health

Tomchik, Robert S., M.D., MPH,
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Warden, Beverly A., Ph.D., MT
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Associate Professor and
Chairperson, Medical Laboratory
Sciences

Weddle, Dian O., Ph.D., R.D., FADA
(University of Illinois), Associate
Professor, Dietetics and Nutrition

Wellman, Nancy S., Ph.D., R.D.,
FADA (University of Miami),
Professor, Dietetics and Nutrition

Williams, Judith K., Ph.D., *Courtesy*
Associate Professor

Yunis, Maha, M.S.H.S., R.R.A.
(University of Central Florida),
Clinical Assistant Professor, and
Program Director, Health
Information Management

School of Hospitality Management

School of Hospitality Management

Anthony G. Marshall, *Dean and Professor*
Lee C. Dickson, *Associate Dean and Associate Professor*
Rocco M. Angelo, *Associate Dean and Professor*
Adele E. Smith, *Assistant Dean and Associate Professor*
Elio Bellucci, *Professor*
M. Chase Burritt, *Adjunct Instructor*
Cheryl Carter, *Visiting Instructor*
Patrick J. Cassidy, *Instructor*
Percival Darby, *Assistant Professor*
Richard B. Donnelly, *Associate Professor*
Marcel Escoffier, *Assistant Professor*
Peter Goffe, *Associate Professor*
Fritz G. Hagenmeyer, *Professor*
Albert J. Halebian, *Associate Professor*
T. Michael Hampton, *Assistant Professor*
William M. Hansen, *Instructor*
William Hebrank, *Adjunct Instructor*
Michael E. Hurst, *Professor*
Charles L. Ilvento, *Professor*
Lendal H. Kotschevar, *Professor Emeritus*
Gerald W. Laffin, *Professor Emeritus*
Steven V. Moll, *Associate Professor and Director, Broward Program*
Elisa Moncarz, *Professor*
Michael J. Moran, *Instructor*
William J. Morgan, Jr., *Professor Emeritus*
Diann R. Newman, *Assistant Professor*
William O'Brien, *Associate Professor*
Alan J. Parker, *Professor*
Nestor Portocarrero, *Associate Professor*
Roger Probst, *Instructor*
Edward A. Remington, *Visiting Assistant Professor*
Joan S. Remington, *Assistant Professor*
J. Kevin Robson, *Associate Professor*
William Stanford, *Instructor*
David M. Talty, *Instructor*
Mary L. Tanke, *Associate Professor*

The School of Hospitality Management offers Bachelor's and Master's degrees and certificate programs that combine practical experience with classroom theory to assist the student to gain the understanding, skills, and techniques needed to qualify for job opportunities, or to achieve his or her career goals in the hospitality industry.

With the cooperation of industry executives, the School has created

an internship program which literally utilizes the hotels, resorts, restaurants, clubs, airlines, travel agencies, and cruise lines as practice labs for students. The advanced phase of the internship program provides each student a structured management training normally not available to a student until he or she has entered the industry after graduation.

An Industry Advisory Board - which includes outstanding executives in the hotel, food and travel industries - works regularly with the faculty, staff, and students of the School to formulate and update a curriculum that is current, flexible, and related to the needs of the hospitality industry.

The School has been designated a Program of Distinction by the Florida Board of Regents.

Note: The programs, policies, requirements, and regulations listed in this catalog are continually subject to review, in order to serve the needs of the University's various publics, and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

Admission

Applicants to the School must submit an Application for Admission to the University and must follow the regular University procedures described in the Admission section of the catalog. Applicants must be eligible for admission to the University before admission to the School.

Each candidate for admission to the graduate program must present his or her score on the GRE or the GMAT and proof of a Bachelor's Degree from an accredited institution.

To be admitted, a candidate must have maintained a 'B' average in all upper divisional work or attained a minimum score of 1000 on the GRE (verbal and quantitative aptitude sections) or attain a minimum score of 450 on the GMAT. A minimum TOEFL score of 500 is required for international applicants.

Applicants who meet admissions criteria but do not have undergraduate preparation in Hospitality

Management must complete a series of undergraduate preparatory courses. Specific courses will depend upon the individual's undergraduate preparation. Twenty-four credit hours of preparatory courses normally will be required. A maximum of six semester hours of graduate credit may be transferred from any other university or from the graduate programs of this University.

There is a requirement that all students work 1000 hours in the Hospitality Industry in addition to the Graduate Internship of 300 hours. A minimum of 800 hours of the total 1300 hours must be completed while enrolled at FIU.

Degree Requirements

To be eligible for a Master's degree, a student must:

1. Satisfy all University requirements for a master's degree.
2. Complete a minimum of 39 semester hours of graduate level coursework in the Hotel and Foodservice Management curriculum.
3. Earn a minimum grade point average of 'B' (3.0) in all approved courses in the student's graduate program of study.

No courses in which a grade below 'C' is earned may be counted toward the Master's Degree in Hotel and Foodservice Management. However, all approved work taken as a graduate student will be counted in computing the grade point average, including courses graded 'D' or 'F'.

Non-Degree Seeking Students

Individuals currently employed in the hospitality field who do not have the educational requirements to meet degree admission standards, may be interested in enrolling in certain specific courses to improve their skills and to enhance their chances for promotion. Any person currently employed in the field may register as a Non-Degree Seeking Student for a total of 15 semester hours.

Location

The School is located on scenic Biscayne Bay at the FIU North Campus at Biscayne Boulevard (U.S. 1) and Northeast 151 Street, North Miami, Florida.

Master of Science in Hotel and Foodservice Management

Undergraduate Prerequisites (24)

Accounting and Finance

HFT 3403	Management Accounting for the Hospitality Industry	3
HFT 3453	Operations Control	3
HFT 4464	Interpretation of Hospitality Industry Financial Statements	3

Foodservice

FSS 3221	Introductory Commercial Food Production	3
FSS 3232	Intermediate Quantity Food Production	3

Management

HFT 3263	Restaurant Management	3
HFT 3503	Hospitality Marketing Strategy	3
HFT 3603	Law for the Hospitality Industry	3

Graduate Course Requirements: (39)

Graduate Core Courses (24)

HFT 5476	Feasibility Studies for the Hospitality Industry ¹	3
HFT 5478	Restaurant Development ¹	
HFT 6227	Hospitality Management Training Systems	3
HFT 6246	Organizational Behavior in the Hospitality Industry	3
HFT 6296	Seminar in Hospitality Management	3
HFT 6446	Hospitality Industry Organizational Information Systems	3
HFT 6477	Financial Management for the Hospitality Industry	3
HFT 6697	Hospitality Law Seminar	3
HFT 6946	Graduate Internship	3
Graduate Electives: (5000 and 6000 level)		15

¹In place of HFT 5476 or HFT 5478 and two electives, the student may choose to complete HFT 6916, the Hospitality Industry Research Project which carries a nine credit hour requirement. The student also must take a graduate course in Research and Statistical Methods which will count as an elective.

Course Descriptions

Definition of Prefixes

FSS - Food Service Systems; HFT - Hotel, Food, Tourism.

F - Fall semester offering; S - Spring semester offering; SS - Summer semester offering.

FSS 6106 Purchasing and Menu Planning (3). Advanced information on sources, grades and standards, criteria for selection, purchasing and storage for the major foods, including development of specifications. Consideration of the menu pattern with particular emphasis on costing, pricing, and the work load placed on the production staff. Item analysis and merchandising features are emphasized. (F,S,SS)

FSS 6365 Foodservice Systems (3). Principles of system analysis applied to the foodservice industry. Attention is given to the organization of modern food production, preparation, and distribution systems. Case study problems require application of economic and management principles for solution.

FSS 6452 Advanced Foodservice Design Operations (3). Advanced planning, programming, and project documentation for commercial food service facilities. Spatial, environmental, and electro-mechanical design factors are stressed, with particular emphasis on efficiency modulation and investment aspects. Recommended: HFT 4343 or FSS 4431.

FSS 6834 Foodservice Research (3). The planning, executing, and reporting of an individual research project dealing with significant problems in food service. Students demonstrate an understanding of research techniques through data collection, evaluation, and interpretation.

HFT 5476 Feasibility Studies for the Hospitality Industry (3). A survey of various theories and techniques available by which management may determine the financial feasibility of investments in the hospitality field. Prerequisites: HFT 3503 and HFT 4464. (S,SS)

HFT 5478 Restaurant Development (3). A study of the procedures to research and develop a restaurant from concept to opening. Emphasis will be on market research, site development, financial feasibility, and the formulation of an operating plan for an individual restaurant. Pre-

requisites: HFT 3504 and HFT 4464. (F,S,SS)

HFT 5595 Problems in Marketing (3). Team-work analysis and recommended solution of actual marketing problems and case studies. Prerequisite: HFT 3503.

HFT 5655 Franchising and Management Contracts (3). A comprehensive course designed to examine the franchise/franchisor - owner/manager relationships in hotel and food service operations and the mutual obligations created by each type of contract. Prerequisite: HFT 3603.

HFT 5718 Quality Service Management in the Hospitality and Tourism Industries (3). Course offers hospitality/tourism students information on TQM as it relates to service quality. Elements necessary to implement and achieve quality service in the visitor industry are considered.

HFT 5719 Implementation and Management of Tourism Projects (3). Practical development, implementation, and management of tourism projects and programs with emphasis on developing tour packages for international and developing nation situations. Prerequisites: HFT 3700 or equivalent. (F,S,SS)

HFT 5901, 5906, 5911 Independent Studies (VAR). With permission from the Associate Dean, students may engage in independent research projects and other approved phases of independent study. (F,S,SS)

HFT 6225 Multicultural Human Resources Management for the Hospitality Industry (3). A study of personnel and consumer relations in the hospitality industry within a multicultural, multiracial, and multiethnic society through an examination of value systems and cultural characteristics. (F,S)

HFT 6226 Motivation and Leadership (3). Study of motivation, perception, learning, attitude formation, incentive theory, and job satisfaction, with emphasis on leadership and group task performance.

HFT 6227 Hospitality Management Training Systems (3). A course designed to provide applications of proven training systems and methods for managers in the hospitality industry. The case study method will be used. (F,S)

HFT 6246 Organizational Behavior in the Hospitality Industry (3). A survey of the concepts of organizational behavior and industrial psychology theory, from both the research and practical points of view. The course is designed to assist students in making sound decisions in the hospitality area by making them sensitive to the organizational parameters which influence their decisions. (F,S)

HFT 6256 International Hotel Operations (3). A consideration of various environments within which the international hospitality firm operates. Organizational, financial, and marketing factors are of major concern. Emphasis is placed on those problems and constraints which are uniquely different from problems of firms engaged in domestic operations of a similar nature.

HFT 6296 Seminar in Hospitality Management (3). Attention is focused on major problems facing management in today's economy. Special emphasis is placed on the foodservice industry. Research of the current literature, field trips, class analysis, and discussion. (F,S)

HFT 6297 Seminar in Management Methods (3). Class will be divided into small groups, each of which will meet regularly with the executive committee of an area hotel or restaurant. Each group will be, in reality, the junior executive committee for the property. The groups will come together periodically for analysis and discussion of their experiences, and to relate their experiences to principles of modern management.

HFT 6298 Case studies in Hospitality Management (3). Case studies are used to analyze and integrate the various disciplines of hospitality management. A critical attitude toward all administrative thought is encouraged. (F,S)

HFT 6325 Hospitality Facilities Engineering and Management (3). Hospitality facilities management from value-oriented system engineering perspective emphasizing management responsibilities for efficiency in building design, operations and utilities systems. Prerequisites: HFT 3403 and HFT 3453.

HFT 6404 Non Commercial and Contract Foodservice Management (3). Advanced management of foodservice operations in noncommercial facilities, self operated and contract managed. Includes busi-

ness and industry, health care, campus dining, correctional, and food-service vending.

HFT 6406 Recreational Foodservice Management (3). Advanced study of financial planning and operational methods used by recreational food service management companies at stadiums, coliseums, arenas, convention centers, amusement parks, pari-mutuels, state and national parks, and other recreational areas.

HFT 6446 Hospitality Industry Organizational Information Systems (3). An introduction to the general concepts and equipment that support information management by computer within the Hospitality Industry. Data file handling and other information management techniques are stressed. Students are first required to write application programs, then to complete a series of assignments utilizing application programs relating to guest cycle management on the school's computerized property management system. (F,S,SS)

HFT 6447 Hotel Information Systems (3). A seminar on computer systems and their applications within the hotel industry. An intensive study of a computerized property management system. All computer applications are examined, from reservations to the back office through a series of assignments and projects. Prerequisites: HFT 3423 or HFT 6446. (F,S,SS)

HFT 6456 Operations Control (3). Focus is directed to the information used in the decision process and the information flow associated with each decision process throughout hotel or restaurant enterprises.

HFT 6477 Financial Management for the Hospitality Industry (3). A study of the principles of financial management and their application to the hospitality industry. Discussion and case studies are used to develop plans for meeting financial needs (short, intermediate, and long term) from internal sources or capital markets. Attention is focused on capital budgeting, leasing, franchising, mergers, consolidations, and current financial issues in the hospitality industry. Prerequisite: HFT 6446 and HFT 4464. (F,S,SS)

HFT 6486 Investment Analysis for the Hospitality Industry (3). Advanced investment methods and opportunities with emphasis on securities of

the hospitality industry, financing techniques, syndication, negotiations. Prerequisites: HFT 6446 and HFT 4464.

HFT 6494 Restaurant Information Systems (3). An in-depth study of principles relating to use of computer systems in the restaurant industry. The student is required to implement a simulated restaurant on two computer systems maintained by the school. This simulation includes personnel files, daily management, menu explosion and analysis, and inventory tracking. In addition, a research project will be assigned. Prerequisites: HFT 3423 or HFT 6446. (F,S,SS)

HFT 6525 Sales Tactics for Hospitality Industry (3). Advanced course investigating sales tactics and procedures used in hospitality sales environment. Practical application role plays and skill rehearsals used. Prerequisite: HFT 3503.

HFT 6526 Sales Management for the Hospitality Industry (3). Analyzes strategic processes for competitive sales management in hospitality industry. Uses critical thinking models, decision-making simulations and field operation assessments for managing sales function. Prerequisite: HFT 3503.

HFT 6586 Research and Statistical Methods (3). A study of basic research methodology applied to a variety of hospitality industry research projects. Techniques for data collection and interpretation, and methods of reporting are considered. (F,S)

HFT 6596 Marketing Management (3). Team-work analysis and recommended solution of an actual marketing problem and development of a marketing plan for hospitality business. Prerequisite: HFT 3503.

HFT 6605 Legislation and the Hospitality Industry (3). An advanced study of the legislative requirements imposed upon hospitality industry operators. Special emphasis is placed on the minimum wage law, sales tax, uniform provision and maintenance, tip credit, the determination of what constitutes hours worked for the various job categories, discrimination, and sexual harassment. Prerequisite: HFT 3603. (F,S,SS)

HFT 6697 Hospitality Law Seminar (3). New laws and their impact on the hospitality industry are exam-

ined. Students research current legal issues and problems and explore the impact of new legislation on the hospitality industry. Prerequisite: HFT 3603. (F,S,SS)

HFT 6705 Management of Nature-Based Tourism (3). Exploration of research methods and findings related to eco-tourism. Review of effective management strategies for controlling nature-based tourism operations.

HFT 6916 Hospitality Industry Research Project (3-9). An individualized research project dealing with current problems in the hospitality industry. Topics and research methods must be approved by the graduate faculty before registration for the course. (F,S,SS)

HFT 6946 Graduate Internship (1-3). Structured hospitality practical training work experience involving training program and job rotations not previously performed. 10 week/300 hour minimum. Report and management project required. Prerequisite: Documented completion of 1000 hospitality related work hours of which at least 500 hours must be completed while enrolled at FIU. Permission of instructor. (F,S,SS)

School of Hospitality Management

Dean **Anthony G. Marshall**
Associate Dean **Lee C. Dickson**
Associate Dean **Rocco M. Angelo**
Assistant Dean **Adele E. Smith**

Faculty

Angelo, Rocco M., M.B.A. (University of Miami), Professor, Management and Associate Dean
Bellucci, Elio, J.D. (Boston College), Professor, Law
Burritt, M. Chase, B.S. (Cornell University), Instructor, Management
Carter, Cheryl, B.S. (Florida International University), Visiting Instructor, Tourism
Cassidy, Patrick J., B.S. (Florida International University), Instructor, Wine Technology
Darby, Percival, M.S. (Florida International University), Assistant Professor, Management
Dickson, Lee C., M.B.A. (Babson College), Associate Professor, Management and Marketing and Associate Dean
Donnelly, Richard B., M.S. (Florida International University), Associate Professor, Foodservice Management
Escoffier, Marcel, M.S. (Florida International University), Assistant Professor, Management
Goffe, Peter, J.D. (University of Miami), Associate Professor, Marketing
Hagenmeyer, Fritz, G., M.A. (Cornell University), Professor, Hotel Engineering
Haleblian, Albert J., B.S. C.P.A. (Cornell University), Associate Professor, Accounting and Finance
Hampton, T. Michael, M.S. (Florida International University), Assistant Professor, Marketing and Management
Hansen, William M., M.S. (Florida International University), Instructor, Catering Management
Hebrank, William, B.S. (University of Illinois), Adjunct Instructor, Wine Technology
Hurst, Michael E., M.A. (Michigan State University), Professor, Management
Iivento, Charles L., M.B.A., C.P.A. (Cornell University), Professor, Accounting and Finance

Kotschevar, Lendal H., Ph.D. (Columbia University), Professor Emeritus
Lattin, Gerald W., Ph.D. (Cornell University), Professor Emeritus
Marshall, Anthony G., J.D. (Syracuse University), Professor, Law and Dean
Moll, Steven V., M.S. (Florida International University), Associate Professor, Management and Director, Broward Program
Moncarz, Elisa, B.B.A., C.P.A. (Bernard/Baruch College, City U. of New York), Professor, Accounting and Finance
Moran, Michael J., B.S. (Florida International University), Instructor, Food Management
Morgan, William J., Jr., Ph.D. (Cornell University), Professor Emeritus
Newman, Diann R., Ed.D. (Nova Southeastern University), Assistant Professor, Human Relations
O'Brien, William, M.S. (Florida International University), Associate Professor, Information Systems Management
Parker, Alan J., Ph.D. (Columbia University), Professor, Information Systems Management
Portocarrero, Nestor, B.B.A. C.P.A. (University of Miami), Associate Professor, Accounting and Finance
Probst, Roger, B.S. (University of New Haven), Instructor, Food Management
Remington, Edward A., M.B.A. (University of Denver), Visiting Assistant Professor, Travel and Tourism
Remington, Joan S., J.D. (Willamette College), Assistant Professor, Tourism and Marketing
Robson, J. Kevin, M.S. (Florida International University), Associate Professor, Food Management
Smith, Adele E., M.S. (Auburn University), Associate Professor, Management and Assistant Dean
Stanford, William, Instructor, Food Management
Talty, David M., B.S. (Florida State University), Instructor, Management
Tanke, Mary L., Ph.D. (Purdue University), Associate Professor, Management

School of Journalism and Mass Communication

School of Journalism and Mass Communication

J. Arthur Heise, *Professor and Dean*
Lillian Lodge Kopenhaver, *Professor and Associate Dean*

William Adams, *Associate Professor*
Margo Berman, *Associate Professor*
Sergio Bustos, *Visiting Instructor*
Humberto Delgado, *Associate Professor*

Mario Diamant, *Associate Professor*
Francisco Diaz, *Director, Student Services*

Louis K. Falk, *Assistant Professor*
Hugh Gladwin, *Director, Institute for Public Opinion Research*

Ann Goraczko, *Coordinator, Institute for Public Opinion Research*

Charles Green, *Director, International Media Center*

Kevin Hall, *Editor-in-Residence*
Kevin Hoeffner, *Coordinator, Student Services*

Michael Huber, *Assistant Professor*
Laura Kelly, *Instructor*

David L. Martinson, *Professor*
Michael McQueen, *Visiting Instructor*

Debra Miller, *Associate Professor*
Anne R. Owen, *Assistant Professor*

Patricia B. Rose, *Associate Professor and Chairperson, Department of Advertising and Public Relations*

Don Sneed, *Professor and Chairperson, Department of Journalism and Broadcasting*

Carlos Suris, *Director, Student Resource Center*

Charles Tuggle, *Assistant Professor*
Juan Vasquez, *Associate Professor*

Lorna Veraldi, *Associate Professor*
Jack Virtue, *Deputy Director, International Media Center*

Master of Science in Mass Communication

The School of Journalism and Mass Communication is fully accredited by the Accrediting Council on Education in Journalism and Mass Communications.

The graduate program of the School of Journalism and Mass Communication offers professional education leading to the M.S. in Mass Communication with current specializations in student media advising, integrated communications: advertising and public relations, journalism and Spanish-language journalism. The orientation of the graduate program is primarily professional, not theoretical. The program is designed to enhance

graduates' abilities to work in the mass communication professions.

Admission Requirements

To be eligible for admission to the graduate program, applicants must meet the following requirements:

1. All applicants must have a bachelor's degree from a regionally accredited college or university.
2. All candidates must show promise of success in graduate studies. The faculty will consider the following criteria in making this determination:

Minimum GPA: Candidates must have a minimum grade point average (GPA) of 3.0 earned during the junior and senior undergraduate years.

Graduate Record Examination (GRE): The GRE or - upon request from the candidate in certain cases - the Graduate Management Admission Test (GMAT) is required. Passing score for the GRE is at least 1000 on the verbal and quantitative portions; passing score for the GMAT is 500. However, if the undergraduate GPA is higher, a lower GRE score can be accepted. No applicant will be admitted to the master's program if his or her GRE score is lower than 850 or GMAT score is lower than 425 or if he/she scores lower than 500 on the verbal portion of the GRE or lower than the 55th percentile on the verbal portion of the GMAT.

Applicants who have taken the GRE more than five years from the date of admission have to repeat the GRE examination.

3. A detailed statement explaining why the applicant wants to pursue the M.S. in Mass Communication.

4. All candidates whose native language is not English must present a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). This requirement may be modified for applicants for special versions of the master's program taught, in part, in languages other than English. Candidates who have passed a TOEFL more than two years before they apply for admission to the program have to repeat the test with the required score.

Application Procedures

A student applying for admission to the graduate program must:

1. Submit an application for admission to the University Admissions Office.
2. Have two official copies of transcripts from all colleges or universities attended sent to the Admissions Office. (Copies submitted by applicants will be rejected.)
3. Submit scores of the GRE and TOEFL to the Admissions Office.

Admission Deadline

Students wishing admittance to the graduate program must apply at least six weeks prior to the start of classes of their first term of graduate study.

Degree requirements

Plan of Study/Commencement of Program

Upon admission to the graduate program in mass communication, each student will be assigned a faculty advisor by the appropriate department chair. In most cases, this will be the director of the appropriate graduate program. The advisor will be responsible for developing the student's plan of study, requesting applicable transfer of credit where appropriate, monitoring the student's academic progress, and ensuring the fulfillment of the requirements for the master's degree by completing the student's Program of Studies with the student. This will also include a timetable for completion of the work. Any changes in the plan must be approved by the faculty advisor and the appropriate chairperson. It is also the faculty advisor's responsibility to complete a Graduate GPA Course Inclusion Form for classes that are part of the master's program but were taken prior to the student's full admission and/or are lower division classes.

In addition to the development of a plan of study, the advisor must evaluate any deficiencies including, but not limited to the following areas which may require additional course work.

Competence in Statistics

Competence in the fundamentals of statistics is required. Competence is demonstrated by students showing that a course has been

taken in statistics before they are allowed to register for MMC 5445 (Applied Research Methods in Mass Media). A student who has not taken a statistics course must register for and take an undergraduate course prior to taking MMC 5445.

Writing and Word Processing Proficiency

Students must pass a grammar proficiency exam with a score of 70 in order to graduate from the program. The exam is provided each semester and is a prerequisite for MMC 6950 Professional Project. Students who fail the test must re-take it. Students can schedule time in the SJMC Writing Lab which is available for self tutoring or, as an alternative, complete the school's undergraduate writing course, MMC 3101, with a grade of B or better. (No graduate credit is given for this course.) The proficiency exam consists of multiple choice grammar and syntax questions. *When Words Collide* by Kessler/MacDonald and the accompanying Exercise Book may be used to prepare for the exam.

Students must have computer word processing skills. Typed work will be required throughout the program.

Students in the Spanish-language master's program must pass a proficiency exam in Spanish, which will include grammar and syntax. The test will be taken on campus at the beginning of the program of study. Passing the exam is a graduation requirement. Students who do not pass the exam will be recommended to enroll in additional courses or provided additional review materials to assist them. Other opportunities to take the exam will be provided each semester.

Professional Experience

Professional experience in a field directly related to the specialization the student plans to pursue is an advantage. Applicants without such professional experience may be required to complete up to 9 credits of additional undergraduate coursework and/or to complete an internship with a professional organization. After an interview with the applicant, the student's faculty advisor will determine the amount of undergraduate work and the undergraduate courses to be completed.

Transfer Credit

Students may petition the appropriate advisor to transfer up to six hours of graduate credit toward the degree. To be approved for transfer, the courses must have been previously taken at a regionally accredited college or university; the student's advisor must judge the courses relevant to the student's plan of study; the student must not have used the credits toward another degree; and the student must have earned a 'B' or higher in the courses. No transfer courses will substitute for skills courses in any area of specialization in the SJMC master's program. All transfer credit must have been completed within the six-year period preceding the date the degree is granted.

Time Limit

All work applicable to the degree, including transfer credit, must be completed within six years.

Grades

Students must maintain a minimum GPA of 3.0 in all courses required for the degree. No more than two 'C' grades will be allowed in computing that 3.0 GPA.

Foreign Language Requirements

No foreign language will be required unless the student's plan of study includes proficiency in another language.

Professional Project, Thesis

Students complete a professional project in their areas of specialization. Work on the project will generally be taken during the final semester. Projects will be graded by the student's graduate committee. Students must receive a 'B' or higher on the project for it to be accepted. Students may also opt to do a thesis; grade requirements are the same.

Required Courses

To earn the M.S. in Mass Communication, students must meet the following requirements:

1. Students must take at least 36 hours of acceptable graduate credit. Of those hours, all courses in the SJMC taken toward graduation must be at the graduate level.
2. At least 27 hours must be in School of Journalism and Mass Communication courses.

Core Curriculum

All students must take the following core courses:

MMC 6402	Theories of Mass Communication	3
MMC 5445	Applied Research Methods in the Mass Media	3
MMC 6950	Professional Project	3

Student Media Advising

Designed primarily for journalism teachers and/or student media advisers on all levels, the program will train teachers/advisers or those aspiring to the profession in areas related to everyday work.

Core Curriculum

All students must take the following core courses:

MMC 6402	Theories of Mass Communication	3
MMC 5445	Applied Research Methods in the Mass Media	3
MMC 6950	Professional Project	3

In addition to the core courses, students in the student media advising specialization must take the following courses:

JOU 5806	Student Media Advising	3
MMC 5207	Ethical and Legal Foundations of the Student Press	3
MMC 6635	Contemporary Issues in Mass Communication	3
VIC 5205	Trends in Graphic Design	3

Students must also take two additional three-credit graduate courses in the School of Journalism and Mass Communication in an appropriate area of emphasis. Courses must be approved by the student's advisor.

Nine hours must be in a field of concentration outside the School of Journalism and Mass Communication. A minimum of three of those credits have to be at the graduate level (5000 or 6000 level).

Integrated Communications: Advertising and Public Relations

Core Curriculum

All students must take the following core courses:

MMC 6402	Theories of Mass Communication	3
MMC 5445	Applied Research Methods in the Mass Media	3

MMC 6950 Professional Project 3
In addition to core courses, ICAP students must take the following program courses:

ADV 6805	Creative Advertising and Public Relations Execution	3
PUR 5xxx	Integrated Communications Proseminar	3
PUR 5406	Multi-Cultural Communications	3
PUR 5607	Advertising and Public Relations Management	3
PUR 5806	Integrated Advertising and Public Relations Planning, and Evaluation	3
PUR 6935	Advanced Advertising and Public Relations Seminar	3
MAN 6245	Organizational Behavior	3
MAR 6506	Advanced Consumer Behavior	3
MAR 6805	Marketing Management	3
MMC 6635	Contemporary Issues in Mass Communication	3

Spanish-Language Journalism with Emphasis in Investigative Reporting

Admission Requirements

To be eligible for admission, candidates must also meet the following requirements:

To have a bachelor's degree or equivalent degree from an institute of higher learning recognized by FIU and a minimum Grade Point Average (GPA) of 3.0 earned during the last two undergraduate years.

To pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 500 points.

To pass the GRE with a minimum score of 1000 or a general knowledge test (PAEG) with a minimum score of 500. The test is the Spanish-language equivalent of the GRE. The Educational Testing Service states that the 500 PAEG is the equivalent of the 1000 level GRE score.

Course Offerings

First Semester

JOU 6196	Advanced Writing Techniques	3
MMC 6402	Theories of Mass Communication	3

JOU 6198	Advanced Public Affairs Reporting	3
INR 6007	Seminar in International Politics	3

Second Semester

MMC 5445	Applied Research Methods in Media	3
MMC 5932	Special Topics Seminar	3
RTV 6309	Advanced Broadcast News	3
ECS 7405	Economics of Latin America	3

Third Semester

MMC 6635	Contemporary Issues in Mass Communication	3
JOU 6931	Seminar on Special Topics	3
JOU 6197	Advanced Reporting Techniques	3
MMC 6950	Mass Communication Professional Project	3

Certificate Programs

Integrated Communications: Advertising and Public Relations

The objective of the Integrated Communications: Advertising and Public Relations certificate is to train interested community professionals in up-to-date strategies and methodologies in integrated communications: advertising and public relations.

Required Courses:

PUR 5xxx	Integrated Communications Proseminar	0
PUR 5806	Integrated Advertising and Public Relations, Planning and Evaluation	3
ADV 6805	Creative Advertising and Public Relations Execution	3
PUR 5607	Advertising and Public Relations Management	3

Plus any two of the following:

MMC 5445	Applied Research Methods in the Mass Media	3
PUR 5406	Multi-Cultural Communication	3
PUR 6935	Advanced Advertising and Public Relations Seminar	3

MMC 6635	Contemporary Issues in Mass Communication	3
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Spanish Language Journalism

The objective of the Professional Certificate in Spanish Language Journalism is to develop skills and techniques that will allow working journalists to be more responsive to the demands of their profession as well as the opportunity to become more familiar with Spanish-language journalism in general. The focus of the program will be on reading, writing, and thinking. All courses will be taught in Spanish. Some courses may be offered off-campus.

The certificate program is being modified. Interested students should contact the department for additional information.

Course Descriptions

Definition of Prefixes

ADV-Advertising; FIL-Film; JOU-Journalism; MMC-Mass Media Communication; PGY-Photography; PUR-Public Relations; RTV-Radio-Television; VIC-Visual Communication.

All courses required for the degree will be offered at least once during the term of the student's enrollment.

ADV 6355 Advertising and Society (3). The relationship between advertising, economic, political, moral, and ethical issues. (Offered at least once a year).

ADV 6805 Creative Advertising and Public Relations Execution (3). Writing and visualization relevant to developing creative executions for integrated communications problems. Prerequisite: PUR 5806. (Offered at least once a year).

JOU 5806 Student Media Advising (3). Designed to assist teachers and advisers of journalism at the high school and junior college level, this course emphasizes the technical aspects of producing student newspapers, yearbooks, and magazines, as well as the legal and ethical considerations facing today's adviser. In addition, attention is given to matters pertaining to curriculum and methodology for effective journalistic instruction. (Offered at least once a year).

JOU 6196 Advanced Writing Techniques (3). Techniques of creative journalistic writing, including descrip-

tion, narration, anecdote, point of view. Prerequisite: Graduate standing.

JOU 6197 Advanced Reporting Techniques (3). Intensive instruction in how to find accurate and printable facts, with emphasis on use of public records. Prerequisite: Graduate standing.

JOU 6198 Advanced Public Affairs Reporting (3). A journalist's examination of how to report urban government and the forces shaping public policy and decision-making. Prerequisite: Graduate standing.

JOU 6199 Judicial System Reporting (3). A journalist's examination of the judicial system, from police headquarters to the courtroom. Prerequisite: Graduate standing.

JOU 6931 Seminar on Special Topics (3). Instruction in specialized areas of journalism. (Offered at least once a year).

MMC 5207 Ethical and Legal Foundations of the Student Press (3). Examines ethical and legal foundations underlying the operation of the student press on American campuses, stressing both rights and responsibilities and how to organize publications to protect both. (Offered at least once a year).

MMC 5445 Applied Research Methods in the Mass Media (3). An advanced course in the acquisition and use of secondary data, including media data, as well as the design, execution and utilization of research studies. Students will conduct an original proprietary study. Prerequisite: STA 3013 or equivalent. (Offered at least once a year).

MMC 5932 Special Topics Seminar (3). A variable topic seminar dealing with issues of interest to the community. Examples are rights of high school journalists, cable TV, the use of mini-computers in creative communication. (Offered at least once a year).

MMC 6402 Theories of Mass Communication (3). Examines theories and processes of mass communication as well as media responsibility to society and the social and ethical responsibility of communicators. (Offered at least once a year).

MMC 6635 Contemporary Issues in Mass Communication (3). Contemporary issues regarding media responsibility to society and the social responsibility of communicators.

Analysis and evaluation of media ethics and performance. Prerequisite: Graduate standing. (Offered at least once a year).

MMC 6950 Mass Communication Professional Project (3). The professional project is designed to demonstrate the student's excellence in an area of communication study. Must be completed within one calendar year. Prerequisites: Completion of all required courses. Completion of 27 credit hours and permission of instructor. (Offered at least once a year).

PUR 5406 Multi-Cultural Communications (3). Explores the multi-cultural dimensions of communications with diverse audiences both internationally and within the United States. Prerequisite: OUR 5806 and ADV 6805.

PUR 5607 Advertising and Public Relations Management (3). Operations and objectives of integrated advertising and public relations activities and programs utilizing case studies on budgeting, ethics, media planning/relations, promotions and direct marketing. Prerequisite: PUR 5806. (Offered at least once a year).

PUR 5806 Integrated Advertising and Public Relations Planning and Evaluation (3). Advanced study in developing, planning and evaluating strategic integrated communications programs and campaigns. Prerequisite: Permission of instructor. (Offered at least once a year).

PUR 6935 Advanced Public Relations Seminar (3). A series of readings, discussions and presentations immerse students in contemporary issues in Advertising and Public Relations. : PUR 5607 and PUR 5806 or permission of instructor. (Offered at least once a year).

RTV 5806 Telecommunication Management Structures (3). Intensive study of telecommunication management problems, theory of same, solutions of same through practical application and examination of case studies. Prerequisite: Graduate standing.

RTV 5935 Seminar In International Comparative Broadcasting Systems (3). Introduction to international telecommunication systems with special emphasis on broadcasting. Comparison with other countries. Prerequisite: Graduate standing or permission of instructor.

RTV 5936 Seminar In New Mass Communication Technologies (3). Discus-

sion of new communication technologies and their influence on the society. Prerequisite: Graduate standing.

RTV 6309 Advanced Broadcast News (3). Advanced techniques, principles and issues of reporting for the electronic media, from spot news to documentaries. Prerequisite: Graduate standing.

RTV 6465C Field Production Practicum (3). The student will be responsible for the organization and complete pre-production, production, and post-production of his/her project(s). Prerequisite: Graduate standing.

RTV 6468C Studio Production Practicum (3). The student will be responsible for the organization and complete pre-production, production and post-production of his/her project(s). Will also be required to do directing and I.D. work. Prerequisite: Graduate standing.

RTV 6937 Seminar in Telecommunication Policies and Planning (3). Introduction to national and international telecommunication policies, with emphasis on planning and decision making. Prerequisite: Graduate standing.

VIC 5205 Trends in Graphics and Design (3). Design principles and how they relate to trends in student and professional media, including newspapers, magazines and yearbooks. Deals with graphics, packaging, typography and modern design. (Offered at least once a year).

School of Journalism and Mass Communication

Dean J. Arthur Heise

Associate

Dean Lillian Lodge Kopenhaver

Chairperson, Advertising
and Public Relations Patricia Rose

Chairperson, Journalism
and Broadcasting Don Sneed

Faculty

Adams, William, M.A. (University of Wisconsin), Associate Professor, Journalism and Mass Communication

Berman, Margo, M.M. (University of Miami), Associate Professor, Journalism and Mass Communication

Bustos, Sergio, B.S. (Virginia Commonwealth University), Visiting Instructor, Journalism and Mass Communication

Delgado, Humberto, M.A. (Goddard College), Associate Professor, Journalism and Mass Communication

Diament, Mario, M.A. (Antioch College), Associate Professor, Journalism and Mass Communication

Falk, Louis K., Ph.D. (University of Southern Mississippi), Assistant Professor, Journalism and Mass Communication

Gladwin, Hugh, Ph.D. (Stanford University), Director, Institute for Public Opinion Research

Goraczko, Ann, M.S. (Florida International University), Coordinator, Institute for Public Opinion Research

Green, Charles, B.A. (Christian International University), Director, International Media Center

Hall, Kevin, B.A. (Fordham University), Editor-in-Residence, Journalism and Mass Communication

Heise, J. Arthur, Ph.D. (Syracuse University), Professor and Dean, Journalism and Mass Communication

Huber, Michael, M.A. (Indiana University), Assistant Professor, Journalism and Mass Communication

Kelly, Laura, M.A., (American University), Instructor, Journalism and Mass Communication

Kopenhaver, Lillian Lodge, Ed.D. (Nova Southeastern University), Professor and Associate Dean,

Journalism and Mass
Communication

Martinson, David L., Ph.D. (University of Minnesota), Professor, Journalism and Mass Communication

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Miller, Debra, Ed.D. (Florida International University), Associate Professor, Journalism and Mass Communication

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Sneed, Don, Ph.D. (Southern Illinois University), Professor and Chair, Department of Journalism and Broadcasting, Journalism and Mass Communication

Suris, Carlos, M.L.S. (University of South Florida), Director, Student Resource Center, Journalism and Mass Communication

Tuggle, Charles, Ph.D. (University of Alabama), Assistant Professor, Journalism and Mass Communication

Vasquez, Juan, B.A. (University of Texas), Associate Professor, Journalism and Mass Communication

Veraldi, Lorna, J.D. (New York School of Law), Associate Professor, Journalism and Mass Communication

Virtue, Jack, B.A. (Carleton University) Deputy Director, International Media Center

School of Nursing

School of Nursing

The School offers a program of study leading to the Master of Science in Nursing (MSN) degree to prepare qualified professional nurses for advanced nursing roles in the care of adults and children. The program offers clinical tracks in adult health nursing, psychiatric-mental health nursing, and child health nursing. Within each track, the student has the option of pursuing the functional role of clinical nurse specialist, nurse educator, or nurse administrator. The design of the program allows for the development of the nurse practitioner role as a base for the development of each of the three functional areas.

Throughout the curriculum, students are guided in the process of self-development to pursue excellence in professional and scholarly endeavors. The program allows flexibility within the basic curricular structure through the individualized learning experiences, electives, thesis, and the opportunity to investigate an area of interest in advanced study.

The curriculum model allows students to enroll on a full-time or part-time basis. The duration for the individual student study plan is determined in consultation with a faculty adviser and is based on the student's background and goals. The program can be completed in four semesters of full-time study, averaging a load of 9-12 credit hours per semester. Part-time study can be completed in a variable time but not to exceed six years.

Program Objectives

Upon completion of the MSN program, graduates will be able to:

1. Provide comprehensive, specialized quality care to clients in various settings, incorporating theories and advanced knowledge into nursing practice.
2. Utilize appropriate teaching, management, consultative, and advanced clinical skills in the exercise of professional responsibilities.
3. Integrate developmental, ethnocultural, socioeconomic, biophysical, and psychosocial concepts in advanced professional role performance.
4. Investigate clinical problems and test theory, contributing to the theoretical basis of nursing and the specialty area.

5. Function as a leader and change agent in the health care and professional arena, enhancing improved delivery of health care and influencing health policy.

6. Demonstrate leadership in the development and implementation of professional standards and conduct.

Graduates are qualified to apply for ARNP licensure in Florida and are prepared to apply for certification by national credentialing agencies as a practitioner or a clinical specialist in the chosen specialty area of adult health, child health or psychiatric-mental health nursing.

Admission Requirements

The applicant must:

1. Meet the admission requirements for graduate education at Florida International University.
2. Have completed a baccalaureate degree in nursing which is accredited by the National League for Nursing (NLN). Applicants with a baccalaureate degree from nursing programs without NLN accreditation will be considered on an individual basis.
3. Have an undergraduate cumulative Grade Point Average (GPA) of at least 3.0 on a 4.0 scale. GPA is based on the last two years of course work in the nursing baccalaureate program.
4. Have evidence of a current RN licensure in Florida.
5. Have at least one year experience of clinical nursing.
6. Have completed an introductory course in statistics (3 credits), basic health assessment course (3 credits), and computer application (word processing).
7. Have obtained a combined score of at least 1000 on the verbal and quantitative scales of the Graduate Record Examination, if the student's undergraduate (BSN) cumulative GPA is below 3.0. Otherwise, the applicant must have obtained a combined verbal and quantitative score of at least 800.
8. Provide the following:
 - a. Statement of philosophy of nursing and professional goals.
 - b. Letters of reference from: 1) a previous nursing faculty; 2) a current immediate supervisor; and 3) a co-worker.

9. For international students (graduates of foreign nursing schools) only:

- a. TOEFL score of at least 500 if not licensed as a registered nurse (RN) in Florida.
- b. CGFNS certification or Florida RN license.

Application Process

Applicants need to complete the following steps in order to be considered for admission:

1. Complete two application forms as indicated and return to the appropriate offices to avoid unnecessary delay in the review process.
 - a. Application for Admission to Graduate Studies - To be returned with a \$20.00 non-refundable service fee to: Office of Admissions, Florida International University, North Campus, ACII-160, North Miami, Florida 33181.
 - b. Application for Admission to the Master of Science in Nursing Program - To be returned to: The Graduate Program Office, FIU School of Nursing, North Campus, ACII-203, North Miami, Florida 33181.
 - c. Request an official transcript of records from each college or university attended. Transcripts should be sent directly to the Office of Admissions.
 - d. Send three reference letters directly to the Associate Dean, FIU School of Nursing Graduate Program.
 - e. Participate in an interview with a faculty member teaching in the graduate program. The interview is for the purpose of verifying application materials, reviewing admission criteria, identifying deficiencies and transferable credits, as well as projecting a tentative plan of study. The applicant should take an active role in the interview process to be informed about the program and the basis for the admission criteria.

Degree Requirements

1. Completion of 42 semester credit hours. Minimum of 36 hours in nursing and 3 hours of non-nursing electives. The required non-nursing electives are restricted to supporting courses for the specialty area or the functional role.

2. Completion of a thesis (6 hours) or a master's paper (3 hours). Students electing a master's paper must complete an additional three hours of cognate course(s).

3. Achievement of an overall cumulative GPA of 3.0 or above. A cumulative GPA of less than 3.0 will place the student on probation for one semester, and she/he may be subject to dismissal if the 3.0 GPA requirement is not met after the probationary period.

4. Removal of all conditions, deficiencies, and incomplete grades. Credit hours for courses in which the grade is 'C' or below will not count toward satisfying graduate degree requirements.

Students are expected to register for courses with letter grades. Electives may be taken as pass/fail subject to the approval of the adviser.

Master of Science in Nursing Curriculum

Core Courses (12)

NGR 5035C	Advanced Client Assessment	3
NGR 5110	Theories in Nursing	3
NGR 5141	Pathophysiological Basis of ANP	3
NGR 5604	Culture and Advanced Nursing Practice	3
NGR 5810	Research Methods in Nursing	3
NGR 6192	Pharmacological Concepts in ANP	3

Clinical Concentration (12)

Advanced Adult Health Nursing

NGR 6201	Advanced Adult Health Nursing I	3
NGR 6210L	Advanced Adult Health Nursing Practice I	3
NGR 6202	Advanced Adult Health Nursing II	3
NGR 6211L	Advanced Adult Health Nursing Practice II	3

Advanced Child Health Nursing

NGR 6300	Advanced Child Health Nursing I	3
NGR 6301L	Advanced Child Health Nursing Practice I	3
NGR 6303	Advanced Child Health Nursing II	3
NGR 6302L	Advanced Child Health Nursing Practice II	3

Advanced Psychiatric-Mental Health Nursing (12)

NGR 6502	Advanced Psychiatric-Mental Health Nursing I	3
NGR 6503L	Advanced Psychiatric-Mental Health Nursing Practice I	3
NGR 6504	Advanced Psychiatric-Mental Health Nursing II	3
NGR 6507L	Advanced Psychiatric-Mental Health Nursing Practice II	3

Functional Role (10)

Clinical Nurse Specialist

NGR 6726C	Nursing Management and Continuous Quality Improvement	3
NGR	Elective	3
NGR 6704L	Role Synthesis in Advanced Nursing Practice	4

Nurse Educator Role

NGR 6713	Curriculum Development in Nursing	3
NGR	Elective	3
NGR 6710	Role Synthesis in Nursing Education	4

Nursing Administrator Role

NGR 6725	Issues and Strategies of Nursing Administration	3
NGR 6726C	Nursing Management and Continuous Quality Improvement	3
NGR 6712L	Role Synthesis in Nursing Administration	4

Research (6)

Master's Thesis Option (6)

NGR 6970	MSN Thesis I	3
NGR 6971	MSN Thesis II	3

Master's Paper Option (6)

NGR 6970	MSN Thesis I (Research Project)	3
	Cognate Electives	3
	Elective	2

Sample Program Progression Plan (Full-Time Study)

Major Track: Adult Health Nursing
Functional Role: Clinical Nurse Specialist
Research Option: Master's Thesis

Semester I

NGR 5035C	Advanced Client Assessment	3
NGR 5110	Theories in Nursing	3
NGR 6201	Advanced Adult Health Nursing I	3
NGR 6210L	Advanced Adult Health Nursing Practice I	3

Semester II

NGR 5604	Culture and Advanced Nursing Practice	3
NGR 5810	Research Methods in Nursing	3
NGR 6202	Advanced Adult Health Nursing II	3
NGR 6211L	Advanced Adult Health Nursing Practice II	3

Semester III

NGR 6970	Master's Thesis I	3
NGR 6192	Nursing Management	3
	Elective	3

Semester IV

NGR 6971	Master's Thesis II	3
NGR 6704L	Role Synthesis in Advanced Nursing Practice	4
NGR Elective		2

Sample Program Progression Plan (Part-Time Study)

Major Track: Adult Health Nursing
Functional Role: Clinical Nurse Specialist
Research Option: Master's Thesis

Semester I

NGR 5035C	Advanced Client Assessment	3
NGR 5110	Theories in Nursing	3

Semester II

NGR 5604	Culture and Advanced Nursing Practice	3
NGR 5810	Research Methods in Nursing	3

Semester III

NGR 6201C	Advanced Adult Health Nursing I	3
NGR 6201L	Advanced Adult Health Practice I	3

Semester IV

NGR 6202	Advanced Adult Health Nursing II	3
NGR 6211L	Advanced Adult Health Nursing Practice II	3

Semester V

NGR Elective	3
NGR Elective	3

Semester VI

NGR 6970	Master's Thesis I	3
NGR 6704L	Role Synthesis in Advanced Nursing Practice	4

Semester VII

NGR 6971	Master's Thesis II	3
NGR Nursing Elective		2

Post-Master's Nurse Practitioner Certificate Program

This Post-Master's Nurse Practitioner Certificate Program is a 16-credit hour curriculum built upon a master's degree in nursing with a clinical nursing major such as adult health nursing, child health nursing, and family health nursing. The program can be completed in two academic semesters in a full-time and part-time basis, a load of 9-7 credits per semester.

Required Courses

NGR 5035C	Advanced Client Assessment	3
NGR 5604	Culture and Advanced Nursing Practice	3
NGR 6192	Pharmacological Concepts in Advanced Nursing Practice	3
NGR 6xxx	Pathophysiology in Advanced Nursing Practice	3
NGR 6704L	Role Synthesis in Advanced Nursing Practice	4

Admission Requirements:

1. A Master of Science in Nursing (MSN) degree with a clinical specialty from an NLN accredited program.
2. A graduate (MSN) grade point average (GPA) of 3.0 or above.
3. Graduate courses in nursing theory (3 credits) and research (3 credits).
4. State of Florida RN licensure. A photocopy of the license must be submitted along with student's application to the Postmaster's Nurse Practitioner Certificate Program.
5. Preadmission interview with a member of the Graduate Nursing Admissions Committee.
6. Two letters of recommendation.

Admission Procedure

File application for admission directly to the School of Nursing Graduate Program Office prior to registration.

Submit official transcripts of all previous college work, both graduate and undergraduate.

If applicant has not previously attended Florida International University, she/he must pay a nonrefundable application fee, payable to FIU.

Application file should be completed at least two weeks before registration. Qualified applicants will be admitted as nondegree seeking students.

Course Descriptions**Definition of Prefixes**

NGR - Nursing Graduate

NGR 5035C Advanced Client Assessment (3). Refinement of health assessment skills fundamental to advanced nursing practice. Emphasis is on critical thinking and diagnostic reasoning required in accurate health assessments, differentiating normal and abnormal. Prerequisites: MSN admission; basic health assessment (3 credits).

NGR 5110 Theories in Nursing (3). Analysis, evaluation, and application of nursing theories to practice, research, education and administration. Prerequisites: Departmental permission. MSN admission.

NGR 5135 Legal and Ethical Dimensions of Advanced Nursing Practice (3). Analysis of legal and ethical precepts and application to moral and legal dilemmas in advanced nursing practice focusing on the advocacy role in promoting rights of individuals and families. Prerequisite: Consent of instructor.

NGR 5136 International Nursing System/Adv Nurs Prac (3). Comparative analysis of philosophical, legal, political, economic and social underpinnings of the nursing progression within the context of international developments and trends in the post-cold war era.

NGR 5141 Pathophysiologic Basis of Advanced Nursing Practice (3). Focuses on the pathophysiologic basis of clinical judgment and client management in advanced nursing practice. Prerequisite: Bachelor of Science in Nursing.

NGR 5250 Physical Change and Healthy Aging (3). Primary health care and wellness with discussion and assessment of normal physiologic alterations and their relationship to common health concerns and medical problems of the elderly.

NGR 5480 Women and Health: A Nursing Perspective (3). Analysis of the unique health concerns of women across the lifespan. Emphasizes a multidisciplinary approach. Prerequisite: Graduate standing.

NGR 5604 Culture and Advanced Nursing Practice (3). Theoretical models explanatory of culture and behavior manifestation of cultural diversity. Focuses on multicultural nursing and methodology for nursing care throughout the life span. Prerequisite: Departmental permission.

NGR 5810 Research Methods in Nursing (3). Research methods and designs commonly used in nursing. Focuses on the research process as it is integrated through the interchange of theory, practice, and research. Prerequisites: Statistics, departmental permission and NGR 5110.

NGR 5871C Nursing Informatics: Computer Mediated Information Technology in Nursing (3). Intro to principles/practices of computer/information technologies in nursing. Theoretical/applied aspects refined in hands-on lab. Prerequisites: Undergraduate statistics; permission of instructor.

NGR 5905 Independent Study in Nursing (1-10). Individually determined, research oriented, in-depth study of a nursing problem or clinical experience as approved by the faculty preceptor. Prerequisites: BSN, permission of instructor, and admission to a graduate program.

NGR 5936 Special Topics in Nursing (1-6). Group study of a specific topic or a limited number of related topics in nursing. Prerequisite: Must be a nursing student or Florida licensed RN.

NGR 6192 Pharmacological Concepts in Advanced Nursing Practice (3). Principles of advanced clinical pharmacology: development, control, action, physiologic response and therapies. Emphasizes commonly prescribed drugs and implications for Advanced Nursing Practice. Prerequisites: Graduate and departmental permit.

NGR 6201 Advanced/Adult Health Nursing I (3). Application of a conceptual model for advanced nursing practice focusing on adult clients in health and/or experiencing minimal-to-moderate alterations in adaptive responses to acute/emergent illness. Corequisites: NGR 5035C and NGR 5110.

NGR 6202 Advanced Adult Health Nursing II (3). In-depth study of severe alterations in adaptive responses to chronic and acute multisystem illnesses. Refinement of practice models, integrating theories of nursing and related sciences. Prerequisite: NGR 6210L. Corequisite: NGR 5810 and NGR 5604.

NGR 6210L Advanced Adult Health Nursing Practice I (3). Application of a conceptual model for advanced nursing practice focusing on adult clients in health and/or experiencing minimal-to-moderate alterations in adaptive responses to acute/emergent illness. Corequisite: NGR 6201.

NGR 6211L Advanced Adult Health Nursing Practice II (3). Advanced nursing practice with adult clients experiencing severe alteration in adaptive responses to chronic/acute multisystem illnesses, focusing on comprehensive application of the nursing process. Corequisite: NGR 6202.

NGR 6300 Advanced Child Health Nursing I (3). Development of a conceptual model for family-centered nursing of children, increasing the breadth and depth of students' theoretical foundation unique to the specialty area. Corequisites: NGR 5110 and NGR 5035.

NGR 6301L Advanced Child Health Nursing Practice I (3). Application of a conceptual model for advanced nursing practice focusing on health states and adaptive alterations of children observed in primary care settings. Corequisite: NGR 6300.

NGR 6303 Advanced Child Health Nursing II (3). Extension and refinement of students' theoretic foundation focusing on family-centered care of children requiring high level technological care and/or multidimensional rehabilitation. Corequisites: NGR 6301L, NGR 5604, and NGR 5810.

NGR 6302L Advanced Child Health Nursing Practice II (3). Application of a refined conceptual model for advanced nursing practice focusing on

family-centered care of children requiring complex technological care and/or multidimensional rehabilitation. Corequisite: NGR 6303.

NGR 6333 Conceptual Issues in Nursing Management of Developmental Disabilities (3). Study of developmental theories, concepts and research findings in context of nursing model. Problems relevant to nursing intervention are examined through critique of pertinent literature. Corequisites: Admission to graduate studies and departmental permission.

NGR 6502 Advanced Psychiatric Mental Health Nursing I (3). Theoretical frameworks for therapies and conceptualization of theory-based practice. Model development for understanding human processes in health and illness. Corequisites: NGR 5035C, and NGR 5110.

NGR 6503L Advanced Psychiatric-Mental Health Nursing Practice I (3). Application of the nursing process use of current research in individual, group, and family therapies. Time-limited and extended-care therapies in collaboration with interdisciplinary team. Corequisite: NGR 6502.

NGR 6504 Advanced Psychiatric-Mental Health Nursing II (3). Development of inductive-deductive approach to theoretical understanding of person-environment patterns in multigenerational and multicultural population. Clinical specialist as therapist and manager. Prerequisites: NGR 6503L. Corequisite: NGR 5810 and NGR 5604.

NGR 6507L Advanced Psychiatric-Mental Health Nursing Practice II (3). Application of the nursing process with clients presenting complex problems or in high risk situations. Collaborative process in therapy and consultation, and planned change. Corequisites: NGR 6504.

NGR 6704L Role Synthesis in Advanced Nursing Practice (4). Advanced nursing practice role with diverse client population. Role developed through contractual agreements in collaboration with faculty and mentors. Prerequisites: NGR 6211L or NGR 6507L.

NGR 6710 Role Synthesis in Nursing Education (4). Application of teaching/learning theories to nursing and selected teaching/learning strategies. Demonstration of various teaching strategies. Teaching practicum. Prerequisites: NGR 6713 and

NGR 6211L, or NGR 6507L, or NGR 6302L.

NGR 6712 Role Synthesis in Nursing Administration (4). Intensive practicum applying leadership, decision-making, management, and administration theories and concepts under the guidance of a nurse executive preceptor and supervising faculty. Prerequisites: NGR 6725 and NGR 6211L, or NGR 6507L or NGR 6302L.

NGR 6713 Curriculum Development in Nursing (3). Curriculum theory and its application in nursing education. Curriculum construction, implementation, and evaluation are discussed from theoretical, philosophical, historical, and current perspectives. Prerequisites: Graduate standing and departmental permission, NGR 5110.

NGR 6725 Issues and Strategies of Nursing Administration (3). Analysis of issues, principles, and concepts of nursing administration. Includes synthesis of behavioral and organizational theories with institutional goals in formulation of administrative strategies. Prerequisites: Graduate standing and departmental permission.

NGR 6726C Nursing Management and Continuous Quality Improvement (3). Role of nurse managers in developing and implementing continuous quality-improvement programs; implications of such programs on health care delivery. Includes role of middle management in personnel development and promoting nursing research in the clinical arena. Corequisites: NGR 6211L, or NGR 6507L, or NGR 6302L.

NGR 6970 Master's Thesis I (3). Refinement of research proposals focusing on methodology and pilot study. Hands-on experience on computerized data analysis. Completion of a research project for non-thesis students. Prerequisite: NGR 5810. Corequisites: NGR 6211L or NGR 6507L or NGR 6302L.

NGR 6971 Master's Thesis II (3). Implementation through completion of student's research thesis proposal. Prerequisite: NGR 6970.

NUR 5495 Women's Health Issues (3). This course is designed to acquaint the student with selected conditions impacting the health of women.

School of Nursing

Dean Linda Agustín Simunek
Associate Dean
Undergraduate
Program Jacquelyn T. Hartley

Faculty

Blais, Kathleen, RN, Ed.D. (*Florida Atlantic University*), Associate Professor and Director Broward Program
Burkett, Marjorie, ARNP, Ph.D. (*University of Miami*), Associate Professor
Coffin, Douglas, RN, Ph.D. (*University of Texas*), Assistant Professor
Ellis, Alvalia, ARNP, MS (*Barry University*), Instructor
Fletcher, Cynthia, RN Ph.D. (*University of Miami*), Assistant Professor
Frock, Terri, RN, Ed.D. (*Florida Atlantic University*), Assistant Professor
Grossman, Divina, ARNP, Ph.D. (*University of Pennsylvania*), Associate Professor and Chairperson, Adult Gerontological and Psychiatric Nursing
Hartley, Jacquelyn, RN, Ph.D. (*Florida State University*), Associate Professor and Associate Dean
Jenkins, Sarah, RN, MSN (*Indiana University*), Assistant Professor
Jorda, Marie Louise, ARNP, MPH (*University of North Carolina at Chapel Hill*), Instructor
Lizardo, Maria Lourdes, ARNP, Ed.D. (*Florida International University*), Assistant Professor
Lobar, Sandra, ARNP, Ph.D. (*University of Miami*), Associate Professor
Lowe, John, RN, Ph.D. (*University of Miami*), Assistant Professor
Macdougall, Barbara, RN, MSN (*Florida International University*), Instructor
Madayag, Tomas, RN, Ed.D. (*University of Sarasota*), Assistant Professor
Martinson, Jace, RN, MSN (*University of Alaska*), Instructor
Parchment, Yvonne, ARNP, MSN (*University of Miami*), Instructor
Phillips, Suzanne, ARNP, Ed.D. (*Florida International University*), Associate Professor
Porter, Luz, ARNP, Ph.D. (*New York University*), Professor
Satian-Rush, Donna, ARNP, Ed.D. (*Florida International University*), Associate Professor

Sherman, Esther, RN, MSN (*George Mason University*), Instructor
Simunek, Linda Agustín, ARNP, Ph.D., J.D. (*Loyola University of Chicago*), Professor and Dean
Thornton, Rosa N., ARNP, MPH (*Florida International University*), Academic Advisor
Velasco-Whetsell, Martha RN, Ph.D. (*University of South Carolina*), Associate Professor and Department Chairperson, Family/Community Nursing
Villanueva, Nancy, RN Ph.D. (*University of Miami*), Assistant Professor
Wilson, Karline, ARNP, MSN (*University of Miami*), Instructor

College of Urban and Public Affairs

College of Urban and Public Affairs

The College of Urban and Public Affairs was established by the Florida Board of Regents in 1994. Its mission is to serve the urban public in South Florida, the Latin American and Caribbean area, and other urban settings by enhancing the ability of individuals to lead, manage and deliver services in public, private, non-profit and health institutions. In support of the University's mission as a comprehensive, multicampus, urban institution, the College offers degree programs of professional study that focus on critical management and policy issues in urban environments.

The College is composed of two schools: the School of Policy and Management and the School of Social Work. Through the School of Policy and Management, the College awards the Bachelor's and Master's degrees in criminal justice, health services administration and public administration, and the Ph.D. in public administration. The School of Social Work offers programs leading to the Bachelor's and Master's degree in social work, and the Ph.D. in social welfare.

In addition, the College of Urban and Public Affairs is home to five centers and institutes. The Center for the Administration of Justice; Institute of Government; Institute for Children and Families at Risk; HRS/Children, Youth and Families Professional Development Centre; and the Institute for Public Management and Community Service may provide various forms of research support to graduate students. Additionally, some of the institutes and centers offer credit or non-credit courses for professionals in the local, national and international community. Additional information on these centers and institutes may be found in this catalog ('General Information - Centers and Institutes').

Students interested in the academic programs offered by the College of Urban and Public Affairs are urged to contact an advisor prior to enrollment for guidance on curriculum and career planning. Please call the School of Policy and Management at (305) 919-5890 or the School of Social Work at (305) 919-5880. Further information may be obtained from the Dean's Office of the College of Urban and Public Affairs at North Campus, Academic I,

Room 200 or by phone, (305) 919-5840.

Graduate Admission Requirements

Applicants to the graduate programs offered by the College must follow the University admissions procedures outlined in the 'General Information' section of this catalog and must meet the university's, the college's and the program's criteria for admission to graduate programs. The criteria for admission to any graduate program in the College of Urban and Public Affairs includes the following:

1. Applicants must meet the general university requirements for admission to a graduate program, complete the Admissions Application and submit the required fees, relevant test scores and official transcripts of all previous academic work.
2. Applicants must hold a bachelor's degree from a regionally-accredited college or university.
3. Applicants must meet the minimum requirements of a 3.0 grade point average in upper-division coursework or a minimum score of 1000 on the Graduate Record Examination (GRE). Please note that all applicants must complete the GRE regardless of their upper-division grade point average. (For degree programs in criminal justice and health services administration, the Graduate Management Admission Test may be substituted for the GRE. See the specific program requirements for minimum scores on the GMAT.)
4. Applicants must meet the specific admissions requirements of the program to which they are applying, as outlined in the following sections. Please note that some programs in the College of Urban and Public Affairs require specific courses that must be completed prior to admission. Potential students should carefully review the program requirements noted in the catalog and consult an advisor for further guidance.
5. Foreign applicants whose native language is not English must present a minimum score of 500 on the Test of English as a Foreign Language (TOEFL). Please refer to the 'General Information' section of this

Catalog for additional information regarding international admissions.

A student who is in the process of applying for admission to a graduate program may, in some circumstances, be permitted to enroll in graduate courses as a non-degree seeking student. Please consult the 'General Information-Classification of Students' section of this Catalog for additional information. In all instances, students who are not fully admitted must consult a program advisor prior to enrolling in any graduate courses offered by the College.

Academic Advisement

All graduate students who have been accepted into a degree program in the College of Urban and Public Affairs will be assigned an academic advisor by the School in which they are enrolled. Students should consult their advisor at least once a semester to review their progress and select courses for the succeeding semester. Failure to consult an advisor can result in unanticipated delays in completing degree requirements.

Transfer Credit

Upon admission to a graduate program, a student may request and receive permission to transfer graduate credits from other programs and/or universities to her or his master's degree program provided that:

1. The student submits a written request to the program director for transfer credit during their first semester of enrollment as an admitted graduate student in the program of study and approval is obtained by the program director prior to the completion of the first semester of study.
2. The hours requested do not exceed the maximum hours allowed by the program.
3. The hours requested do not exceed the maximum hours allowed by the university as described in this catalog. (See 'General Information - Transfer of Graduate Credit from Other Institutions'.)
4. The transfer courses were taken at the graduate level at an accredited college or university and are listed on an official transcript received by the Office of Admissions.

5. Grades of 'B' or higher were earned. Note: A 'B-' is not acceptable.

6. The courses are judged by the program director to be relevant to the student's graduate program.

7. The credits were not used in satisfying the requirements for another degree, or included in another degree.

8. The credits were completed within six years preceding the admission to the graduate degree program.

The decision to award transfer credits is a programmatic decision and is subject to the discretion of the program director in accordance with the stipulations outlined above. It is incumbent that all requests for transfer credit be finalized within a student's first semester of enrollment to insure that the student can develop a planned program of study.

Degree Requirements

To be eligible for a graduate degree through the College, a student must:

1. Satisfy all University requirements for the graduate degree.

2. Meet the requirements for the program of study. This program of study must concur with the requirements outlined in this catalog and be approved by the appropriate School.

3. Earn a minimum overall GPA of 3.0 in all work completed in the student's graduate program of study.

4. Earn a minimum grade of 'C' in each course taken for the graduate degree. A student must repeat all courses in which a grade lower than a 'C' was received and must complete those courses with a grade of 'C' or better. Note: A 'C-' is not acceptable for graduate coursework.

5. Under the University's forgiveness policy, graduate students may repeat no more than two courses for the purpose of raising their overall GPA, and no course may be repeated more than once. All courses repeated by graduate students shall be taken for a letter grade.

Time Frame for Completion of Degree

Students should consult the degree requirements for their program to determine the time frame in which all coursework must be completed for the graduate degree. In the absence of specific time limitations, all

work applicable to degree requirements, including transfer credit, must be completed within six years immediately preceding the awarding of the graduate degree.

Graduate Level Courses

The College restricts enrollment in graduate level courses as follows: The 5000-level courses are open to graduate students and to undergraduate seniors who obtain permission from the instructor.

The 6000-level courses are open only to graduate students.

The 7000-level courses are open only to doctoral students.

Clinical and Field Experiences

As an integral part of the graduate curriculum, students may be required to participate in supervised learning experiences in community service agencies. The clinical and field work experience is one of orientation, observation, and practice in the particular program specialties of the College and it is structured concurrently with relevant classroom experiences. In programs where the clinical or field experience is not required, students are urged to explore the possibility of engaging in such an experience with their program director. Numerous community organizations provide opportunities for student internships and field practices.

Continuing Education and Special Programs

The College of Urban and Public Affairs, through its Centers and Institutes and in cooperation with the Division of University Outreach, offers many credit, non-credit, and workshop courses at off-campus locations in Dade, Broward, and Monroe Counties. Courses and locations vary each semester. Further information can be obtained directly from the Division of University Outreach or the relevant centers and institutes of the College.

Changes to Curriculum Requirements

The programs, policies, requirements and regulations listed in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. This is especially true for several programs in the College of Urban and Public Affairs that are subject to national accreditation requirements. According to uni-

versity policy changes in the curriculum may be made without advance notice.

Generally, the College of Urban and Public Affairs makes every effort to minimize the impact of curriculum changes on currently-enrolled students by stipulating that students complete the requirements of their degree program in effect at the time of admission to the program. In the event that this is not possible due to accreditation standards or the deletion of courses, students may be required to complete alternative degree requirements in order to graduate. All changes in a student's curriculum requirements must be noted in the student's official file, maintained by the appropriate School. Students should review their file to insure that all documentation of changes to their approved program of study are noted.

School of Policy and Management

David Bergwal, *Director*

Howard Frank, *Associate Director*

The School of Policy and Management includes Criminal Justice, Health Services Administration, and Public Administration.

Criminal Justice

Ellen G. Cohn, *Assistant Professor*

Stewart D'Alessio, *Assistant Professor*

Suman Kakar, *Assistant Professor*

Jose Marques, *Associate Professor*

Luis Salas, *Professor*

Regina Sheam, *Associate Professor*

Robert Snow, *Associate Professor*

Lisa Stolzenberg, *Assistant Professor*

W. Clinton Terry, *Associate Professor*

James Vardalis, *Assistant Professor*

William Wilbanks, *Professor*

Criminal Justice is an area of study dealing with the formal mechanisms of social control by which society exercises constraint over its members. The study of criminal justice is interdisciplinary. It involves law, the social and behavioral sciences, crime, the reaction of society to the crime problem, and the means utilized in treating it.

A variety of career opportunities are available in criminal justice at all levels of government and the private sector. Due to its interdisciplinary approach, the study of criminal justice fills the needs of students seeking careers in teaching, research, law, and within the various agencies of the criminal justice system.

Master of Science in Criminal Justice

The Master of Science degree program in Criminal Justice is a professional program designed to prepare students for management responsibilities in the criminal justice sector or public sector related activities.

The objectives of the master's program are:

1. To provide present and future criminal justice managers with the skills needed to function effectively in our ever-changing society.

2. To serve as a catalyst for interdisciplinary research and study of criminal justice and related problems.

3. To provide the criminal justice system with qualified students for

academic careers in administration, planning and analysis, and teaching in colleges and universities.

Students having a bachelor's degree from an accredited institution and a minimum of a 3.0 GPA in all undergraduate upper division work, or a total score of 1000 on the Graduate Record Examination (verbal and quantitative) or a score of 500 on the Graduate Management Admission Test (GMAT), or a graduate degree from an accredited institution are eligible for admission to the program. All applicants must complete the GRE prior to full admission status. A maximum of 12 semester hours may be taken as a non-degree seeking student. This status does not guarantee admission to the degree program.

Degree Credit Requirements

The Master's degree in Criminal Justice requires 36 semester hours of credit. A maximum of six semester hours not included in another degree may be transferred into the program from an accredited institution, subject to the approval of the Program director. Candidates have the option of two programs of study: the thesis and non-thesis options. Those selecting the thesis option are required to complete 30 semester hours of course work and six semester hours of thesis. The non-thesis option consists of 36 semester hours of coursework. All candidates must take six core courses.

Specific Program Requirements

Six courses in criminal justice are required and the remaining courses are electives, two of which may be thesis requirements, and two may be taken outside of criminal justice if no courses have been transferred into the program from another degree program.

Core Courses: (18)

CCJ 5288	Legal Issues for Criminal Justice Administrators	3
CCJ 6025	Theory in Administration of Justice	3
CCJ 5105	Police Organization, Behavior, and Administration	3
CCJ 5285	Judicial Process and Policy	3
CCJ 5445	Corrections and Correctional Management	3
URS 6806	Research Methods and Design	3

Electives: (18)

CCJ 5056	History and Philosophy of Criminal Justice	3
CCJ 5216	Criminal Law	3
CCJ 5235	Criminal Procedure	3
CCJ 5286	Comparative Law	3
CCJ 5287	Legal Aspects of Corrections	3
CCJ 5525	Seminar in Juvenile Delinquency	3
CCJ 5605	Deviance and Social Control	3
CCJ 5669	Minorities In Justice Administration	3
CCJ 5935	Special Topics	3
CCJ 6456	Administration and Management of CCJ Agencies	3
CCJ 6477	Seminar In Information Systems	3
CCJ 6665	Victimology and Criminal Justice System	3
CCJ 6706	Applied Statistical Techniques for CCJ	3
CCJ 6716	Planning and Program Evaluation	3
CCJ 6915	Directed Individual Graduate Study in Criminal Justice	3
CCJ 6945	Field Research in CCJ	3
CCJ 6971	Thesis Research	1-3
CCJ 6976	Masters Thesis Defense	4

Additional Procedures

Thesis tract students will select a committee of three graduate faculty members, the student's major faculty advisor being a member and chairperson of this committee. The major advisor and committee will be responsible for overseeing the student's work while in the master's program. Admission to the program should not be construed as admission to candidacy for a degree. Students may apply for candidacy upon completion of 15 semester hours. Admission to candidacy should be completed before the student enrolls for the last 12 hours.

Graduation Requirements

To receive the master's degree in criminal justice, a student must satisfy all university regulations governing graduate study. Students in the thesis track must be admitted to candidacy and complete the six core courses, four electives, and the two thesis courses. The student may be required to undergo an oral discussion of the thesis. Students in the non-thesis track must be admitted

to candidacy and complete the six core courses and six electives. A minimum GPA of 3.0 is required.

Course Descriptions

Definition of Prefixes

CCJ-Criminology and Criminal Justice; URS-Urban Regional Studies.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

CCJ 5056 History and Philosophy of Criminal Justice (3). The historical and philosophical background of criminal justice is presented as a basis for a more analytical understanding of the problems and prospects of criminal justice organization, management, and behavior.

CCJ 5105 Police Organization, Behavior, and Administration (3). Analysis of the organization and administration of police departments and their effects on police behavior. (F,S)

CCJ 5216 Criminal Law (3). A concentrated study of the substantive criminal law based upon concepts, statutes, and cases that are enforced in state and federal courts. (S)

CCJ 5235 Criminal Procedure (3). A case study of major legal cases dealing with criminal procedure in the United States. (F)

CCJ 5285 Judicial Process and Policy (3). The functions, roles, and interactions of decision makers will be analyzed and evaluated. The policy decisions and processing of criminal cases within the judicial system will be examined. (F,S)

CCJ 5286 Comparative Law (3). An analysis of the major legal families of the world. Emphasis shall also be given to legal families which are becoming more important as colonialism comes to a close. (S)

CCJ 5287 Legal Aspects of Corrections (3). A study of the contemporary legal rights of convicted offenders, including the impact of litigation on offenders, correctional agency personnel and operations, and other justice agencies. Case law and statutes will be reviewed within the context of the punishment and/or rehabilitation of the offender. (F)

CCJ 5288 Legal Issues for Criminal Justice Administration (3). The course will focus on a basic understanding of administrative law and procedures in the American system.

Topics will include the methods and limitations of the administrative process as it is developing in the American legal system. (F,S)

CCJ 5347 Correctional Intervention Strategies (3). An overview and critical assessment of treatment and rehabilitation programs in corrections, including prisons, probation and parole, halfway houses, and pre-trial programs. Relevant research will be reviewed.

CCJ 5445 Corrections and Correctional Management (3). The course focuses on current critical issues and problems in the management of adjudicated offenders in correctional systems. The organization and administration of community and institutional corrections agencies will be reviewed and their performance analyzed. (F,S)

CCJ 5525 Seminar in Juvenile Delinquency (3). Focuses on the nature, scope and causes of delinquency; considers problems of the assessment and measurement of delinquency. The philosophy, procedures, and effectiveness of the juvenile courts will be examined, including abuse, dependency, neglect, delinquency, and family law. (S)

CCJ 5605 Deviance and Social Control (3). This course will cover the major theoretical issues and ideas concerning deviant and criminal behavior and methods of socially controlling these behaviors. (F)

CCJ 5669 Minorities in Justice Administration (3). Focuses upon the disparity in outcomes for minority groups (i.e. racial/ethnic/sexual) across the criminal justice system, and on alternative explanations for those differences in outcome. Also, issues related to the hiring and promotion of minority groups who work in the criminal justice system will be discussed. (F)

CCJ 5935 Special Topics (3). An intensive analysis of a particular topic in criminal justice not otherwise offered in the curriculum. Topics may change each term, but may include organized crime, white collar and political crime, victimology, ethics, terrorism, sentencing, information systems, and other topics based on student interest or current concern. May be repeated. Prerequisite: Graduate Standing. (F,S,SS)

CCJ 6025 Theory in Administration of Justice (3). The study of theoretical and research issues related to the

nature and causes of crime and the administration of justice. (F,S)

CCJ 6456 Administration and Management of Criminal Justice Agencies (3). An examination of the criminal justice system from the perspective of administrative and management theory. Emphasis is upon the identification of organizational and administrative problems and their solutions. (F)

CCJ 6477 Seminar in Information Systems (3). An advanced seminar in the survey and application of electronic data in the criminal justice system. Prerequisite: COC 3300 or permission of instructor.

CCJ 6665 Victimology and the Criminal Justice System (3). An examination of the relationship of victims and offenders and the manner in which the criminal justice system responds to victims of crime.

CCJ 6716 Planning and Program Evaluation (3). A systematic review of the problems involved in productivity, improvement in criminal justice agencies, and program evaluation.

CCJ 6915 Directed Individual Graduate Study in Criminal Justice (3). Students can select a particular aspect of criminal justice for in-depth independent study with a criminal justice faculty. Prerequisite: Graduate standing. (F,S,SS)

CCJ 6945 Field Experience in Criminal Justice (3). A course designed to provide selected students an opportunity to engage in action-oriented research within a criminal justice agency on a designated research project. (F,S,SS)

CCJ 6971 Thesis Research (1-3). This course is devoted to the actual research labor required for a thesis in the Masters program. (F,S,SS)

CCJ 6976 Masters Thesis Defense (1-3). This course is devoted to the effort required to prepare the thesis document. (F,S,SS)

URS 6806 Research Methods and Design (3). Theories and concepts of research and evaluation. Specific focus given to action components of the research process: design and formulation, strategies and methodological tools for conducting research. Discussion of the role of research in administrative decisions and in testing ways to implement public policy. A review of contemporary critiques on research design. (F,S)

Health Services Administration

David Bergwall, *Associate Professor*
 Gloria Deckard, *Assistant Professor*
 Thomas Dunaye, *Professor*
 Burton Dunlop, *Senior Lecturer*
 Rosebud Foster, *Professor*
 Gerald Mills, *Assistant Professor*
 Frederick Newman, *Professor*
 Martha Pelaez, *Senior Lecturer*
 Max Rothman, *Senior Lecturer*
 Debra Tennyson, *Assistant Professor*
 Vandon White, *Professor*

The program in Health Services Administration offers graduate and undergraduate studies leading to Bachelors and Masters degrees in Health Services Administration.

The Graduate Program in Health Services Administration is accredited by the Accrediting Commission on Education for Health Services Administration (ACEHSA). Accreditation by this agency ensures the student that the program has been reviewed and meets the national standards for graduate studies in the field.

The management of health services occurs in an environment of organizational and technological change. Administrators charged with executive responsibilities must be grounded in a high degree of formal professional training followed by lifelong learning which fosters their continuous professional growth. Many of the same skills needed for executive management are now also required to provide leadership in staffing, directing, coordinating, and controlling the operational resources of administrative and clinical units in such organizations.

The Master of Health Services Administration (MHSA) provides professional education for management careers in health services delivery organizations. The degree addresses the theories and issues of managing complex organizations in both public and private settings. The program is organized to meet the needs of the working student. Many individuals enrolled are already employed in administrative roles in the field. While enhancing their career, they bring the wealth of their experience to the classroom.

The Master's program is designed so that full-time students may complete all course work in five semesters. The same curriculum can be completed by part-time stu-

dents within three years. Formal studies stress a basic foundation of professional knowledge, skills and competencies in management, planning, analytic and policy functions of health services administration.

Since these studies provide a professional emphasis, the Program utilizes a variety of local hospitals, long-term care facilities, mental health programs, multi-institution corporations, emergency medical systems, health maintenance organizations, community health centers, and related public health and private agencies to give students supervised field experiences and a 'practical laboratory' for operational research in health service administration.

The goal of the program in Health Services Administration is to create an academic center in which the University can respond to the educational needs of the field of health services administration. The Program's mission, therefore, is dedicated to the following educational objectives:

1. To provide professional studies in the theories, methods and practices of health care management, planning, analysis, applied research, and policy development in health services organizations.
2. To participate in interprofessional education experiences with faculty, students, and practitioners of the allied health sciences, public affairs, public health, and related human services professions interacting with the field of health care management.
3. To extend consultation and technical assistance to appropriate organizational settings and practitioners in health services and administrative practice.
4. To conduct scholarly and applied research on various management problems and issues of significance to improve the delivery of health services.
5. To review and revise program curricula and objectives from time to time in order to keep current with the changing educational and professional needs of the field.

Master of Health Services Administration

Admission Requirements

Students seeking admission into the graduate program must meet the following minimum requirements:

1. Satisfactorily meet the general University requirements for admission to graduate programs.
2. Hold a bachelors degree from a regionally accredited university or college.
3. Show promise of success in graduate studies as determined by the faculty. Admission to the program will be based upon a combination of the Graduate Record Examination (GRE) and the upper-division (last 60 hours) grade point average. Students who have taken the Graduate Management Admissions Test (GMAT) may submit that score in place of the GRE. Each applicant must have a composite score on the verbal and quantitative sections of the GRE of at least 1000 (for the GMAT at least 450) or a GPA for the last 60 hours of 3.0 or higher on a 4.0 scale. All applicants are required to submit a GRE or GMAT score.
4. Foreign students must obtain a minimum score of 500 on the TOEFL examination.
5. Prerequisites for admission include coursework in accounting, statistics and micro-economics with a grade equivalent of 'C' or higher. Entering students are expected to possess basic microcomputer skills including word processing and spreadsheet applications. Students who do not have these skills or prerequisites may complete these requirements in their first semester of study.

Meeting the minimum requirements does not guarantee admission to the program. Admission will be based on additional factors including compatibility of the applicants career goals with the programs objectives, relevance of work experience, etc. The Program Admissions Committee may require a personal interview as a part of the application process.

All applications for admissions should be received by the Program no later than two months preceding the semester in which the student wishes to commence the program. A maximum of 12 semester hours taken as an affiliated student can be used toward the degree. Affiliated status does not

guarantee admission to the degree program.

Admissions Procedures

A student wishing to enroll in the graduate program must complete the following:

1. Submit a Graduate Application to the University Admissions Office.
2. Have official transcripts of all previously earned college or university credits sent to the Admissions Office.
3. Submit scores on the Graduate Record Examination or GMAT.
4. Submit a program application including three letters of reference to the Program of Health Services Administration.

Effective for students entering the program 8/30/95 or afterward, Advanced Standing provides students with an undergraduate degree in Health Services Administration or in an administrative discipline to waive equivalent course content and to complete the Master's of Health Services Administration degree with 42 to 48 credit hours. The maximum allowable waiver of courses for Advanced Standing is nine credit hours. Courses for which the waiver may be granted include:

HSA 5125	Introduction to Health Services
HSA 6185	Management of Health Care Organizations
HSA 6426	Legal Aspects of Health Care

Students must apply for Advanced Standing upon admission to the Program or during their first semester in the Program. To apply for Advanced Standing, the student must complete a Petition Form and document equivalent course content. The application for Advanced Standing must be approved by the three member HSA Curriculum Committee.

Students entering the MHA program with an undergraduate degree in business administration (BBA) and possessing equivalent management course work may apply for a waiver of URS 6654 Organization Design and Change allowing them to complete the Program in 48 credit hours.

Degree Requirements

To be eligible for a Master's degree, a student must:

1. Satisfy all University requirements for the Master of Health Services Administration Program.
2. Complete a minimum of 51 semester hours of graduate level coursework in the approved program.
3. Earn a minimum GPA of 3.0 or equivalent in all work completed at the University as a graduate student.
4. No courses in which a grade below 'C' is earned may be counted toward the master's degree.
5. A maximum of nine semester hour-credits of graduate coursework not included in another degree, may be transferred from an accredited university by petition at the time of admission.

All students completing the master's program are subject to graduate student regulations and degree requirements governed by the policies of the College of Urban and Public Affairs and the University.

Courses are sequenced to enhance the development of competencies as students progress through the curriculum. Students need to pay attention to course prerequisites and adhere to course sequencing.

Program Total: (51)

Core Courses required of all students: (45)

Group 1

HSA 5125	Introduction to Health Services	3
HSA 6415	Managerial Applications of Social Determinate of Health	3
URS 6155	Quantitative Methods and Analysis	3
URS 6654	Organizational Design and Change	3

Group 2

HSA 6175	Financial Management of Health Services I	3
HSA 6185	Health Services Organization and Management I	3
HSA 6756	Applied Program Development and Evaluation Methods	3
URS 6028	Policy Analysis and Program Planning	3

Group 3

HSA 6149	Strategic Planning and Marketing of Health Care Services	3
HSA 6176	Financing and Reimbursement of Health Delivery Systems	
HSA 6187	Personnel Management and Labor Relations	3
HSA 6197	Design and Management of Health Information Systems	3

Group 4

HSA 6426	Health Law and Legal Aspects of Management	3
HSA 6717	Advanced Health Services Management and Research Seminar	3
HSA 6930	Professional Seminar in Health Services Management	1

Field Elective: (one of the following)

HSA 5225	Long Term Care Management I	3
HSA 6215	HMO and Ambulatory Care Administration	3
HSA 6205	Hospital and Health Facilities Management	3
HSA 6245	Mental Health Administration and Planning	3

Integrative Experience

One of the Following Three:

HSA 6977	Master's Research Project	2-6
HSA 6875	Administrative Residency	2-6
HSA 5876	Administrative Residency in Nursing Home Settings	6

Open Elective: (3)

Students may select an elective course from the following or from other units of the University (i.e., public administration, business administration, public health or other disciplines) with an advisors approval.

HSA 5408	Health Service Consumer Behavior	3
HSA 5935	Special Topics in Health Services	3
HSA 6905	Independent Advances Study	3

HSA 5226	Management in Long Term Care	3
HSA 5227	Long Term Care Management II	3
HSA 5816	Practicum in Long Term Care Management	3
HSA 5455	Ethical Decision Making in Health Administration	3
HSA 5876L	Administrative Residency in Nursing Home Settings	3

Nursing Home Administration

Students interested in nursing home administration and seeking licensure as a nursing home administrator in the State of Florida are advised to take the following courses within their program of study:

HSA 5225	Long Term Care Management I	3
HSA 5227	Long Term Care Management II	3
HSA 5177	Financing and Reimbursement for Long Term Care (in place of HSA 6176)	3
HSA 5876	Administrative Residency in Nursing Home Settings	6

Administrative Residency

A three-month administrative residency in a health care organization is offered to all students. Students lacking health services administrative experience are encouraged to complete administrative residency.

The residency is considered an integral part of the educational process. It is designed to provide practical experience with the theories, concepts, and administrative skills the students acquired during the first year of academic study. The residency is normally arranged in an agency or institution compatible with the student's area of interest. The student works full-time with the health agency during this period. The faculty supervises the student during this period.

Students must apply for the administrative residency, be approved and placed in an agency by the Program the semester before the residency begins.

Course Descriptions

Definition of Prefixes

HSA - Health Services Administration;
HSC - Health Sciences; URS-Urban and Regional Studies

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

HSA 5125 Introduction to Health Services (3). The American health care system is broadly analyzed in social, economic, and political terms, including examination of its major operational and programmatic components as they have evolved in their changing patterns and trends of organizational development. (F,S,SS)

HSA 5177 Financing and Reimbursement for Long Term Care Facilities (3). This course introduces the theory and practice of government regulations as they pertain to long term care facilities. The program seeks to identify the critical elements for securing payments for service and study relevant capital investment procedures and policies. Prerequisite: HSA 5225. Corequisite: HSA 5227. (S,SS)

HSA 5225 Long Term Care Management I (3). Long term care facility organization and management are studied. Management implications of the social, economic, financial, and regulatory environment of nursing homes are examined. Prerequisite: HSA 6185. (F)

HSA 5226 Management of Long Term Care Systems (3). Organizational, financial, and policy issues in the management of long term care systems in the U.S. with special emphasis on State of Florida. (S)

HSA 5227 Long Term Care Management II (3). Survey of theories of geriatric care for understanding the aging process. Focus is on the application of knowledge of the aging process to management and care given in nursing homes. Corequisite: HSA 5816. (S)

HSA 5408 Health Services Consumer Behavior (3). Course examines the factors affecting consumer choice in the utilization of types of health services, health services delivery locations, and methods of health care delivery. Examines the role of the provider in consumer behavioral model.

HSA 5455 Ethical Decisions in Health Services Administration (3). This course will study ethical principles as they apply to areas of management, supervision and clinical practice in the delivery of health care. Emphasis is on managerial decision-making. Prerequisites: HSA 5125, HSA 6185.

HSA 5816 Practicum in Applied Management in Long Term Care (3). Students will spend 180 hours in supervised practice in a nursing home setting. They carry out managerial responsibilities related to the administration of the facility. Corequisite: HSA 5227. (S)

HSA 5876L Administrative Residency in Nursing Home Setting (6). Students will spend 480 hours of supervised practice in a selected nursing home to gain experience in organization and management within the nursing environment. Prerequisites: HSA 5816, HSA 5225, HSA 5226, HSA 5227. (F,S,SS)

HSA 6147 Comparative Health Systems and International Health Planning (3). Students are directed through a study of the social, economic, political, and cross-cultural aspects of comparing health care systems of different countries of the world in terms of international perspective and relevance to future developments in the U.S. system.

HSA 6149 Strategic Planning and Marketing of Health Care Services (3). Principles, techniques, and case study applications of strategic planning and marketing in the context of changing environmental, policy, and competitive forces in the health services industry. Prerequisites: HSA 6175 and HSA 6415, or permission of instructor. (F,S)

HSA 6155 Health Policy and Economics (3). The impact of government, private sector, and various interest groups on health care policy determination is analyzed through the application of basic economic principles. Prerequisite: HSA 6175 or permission of instructor. (S,SS)

HSA 6175 Financial Management of Health Systems (3). Aspects of modern hospital and health care organization financial management are covered to prepare students for executive roles in policy planning and control responsibilities involving budgeting, auditing, investing, capital financing, etc. Prerequisite: HSA 5125, HSA 6185, or permission of instructor. (F,S)

HSA 6176 Financing & Reimbursement of Health Systems (3). Financing models for health delivery systems are examined. Reimbursement strategy of medicare, medicaid and other third party payors are analyzed. Prerequisites: Ac-

counting and microeconomics or permission of instructor. (S,SS)

HSA 6185 Health Services Organization and Management I (3). This is the anchoring course for examining each specialized study of the management functions in theory and in practice as they apply to health care organizations of both public and private sectors.

HSA 6186 Health services organization and management (3). General theories of organizational behavior and executive functions are examined in their application to hospitals and other health agencies. Prerequisite: HSA 6185 or instructor's permission. (F,S)

HSA 6187 Personnel Management and Labor Relations (3). Staffing function of manpower and related personnel resources in health care organizations: practices of wage determinations, take analysis, employee recruitment/selection, work evaluation, collective bargaining, and contract negotiation implications. Prerequisite: HSA 6185 or permission of instructor. (F,SS)

HSA 6195 Quantitative Managerial and Applied Research Methods (3). Surveys the operations research tools and techniques used in health care organizations to solve operational and control problems that impact on efficiency, effectiveness, productivity, technological change, innovation, retrofitting. Prerequisite: Permission of instructor.

HSA 6196 Research Design and Applied Analytical Techniques for Health Care Information (3). Develops skills and techniques for the quantitative analysis of various data sets for health organization administrative and clinical information.

HSA 6197 Design and Management of Health Information Systems (3). The development and management of health information systems to support managerial decision-making. Emphasis is on the integration of clinical, personnel, and financial data. (S)

HSA 6205 Hospital and Health Facilities Organization (3). Administrative theory and management principles are examined in their application to the organizational analysis of hospitals and health care facilities. Prerequisites: HSA 5125, HSA 6185 or permission of instructor. (F)

HSA 6215 HMO and Ambulatory Care Administration (3). Overview of

the management process employed in health maintenance organizations (HMO's) and other group medical practices operating under various financial arrangements, including pre-payment. Prerequisite: HSA 5125, HSA 6185, or permission of instructor. (S)

HSA 6245 Mental Health Administration and Planning (3). Psychiatric and mental illness institutions are examined in terms of specialized organizations and administrative knowledge required for the operation of these types of health care facilities and their particular patient populations. Prerequisite: Permission of instructor. (SS)

HSA 6405 Behavioral Aspects of Health and Illness (3). Psychological determinants of health, illness, and sick role behavior, with emphasis on risk taking behavior and preventive intervention. Critical review of models of health behavior.

HSA 6415 Managerial Applications of the Social Determinants of Health (3). Social, psychological, and cultural determinants of health and their impact on health behavior and utilization are examined. Implications explored for managerial decision-making and health policy. (F,SS)

HSA 6426 Health Law and Legal Aspects of Management (3). The broad range of legal issues in health care and administrative aspects of law that concern health care managers are surveyed for implications concerning malpractice, patient rights, contracts, liability and immunity, taxation, surgical consent, etc. Prerequisite: HSA 6185 or permission of instructor. (S,SS)

HSA 6717 Advanced Health Services Management and Research Seminar (3). Integrates the theoretical and practical knowledge of other courses and activities in the curriculum. Selected case studies and relevant research provide the substantive framework for seminar analysis of issues and policy questions. Prerequisite: Completion of all other coursework or permission of instructor. (S,SS)

HSA 6756 Applied Programs Development and Evaluation Methods in Health Services (3). Program evaluation as part of on-going assessment of effectiveness and resource consumption (costs). Evaluation models and study design are analyzed. Grant proposal writing is emphasized. Prerequisite: URS 6155 and HAS 6415. (S)

HSA 6875 Administrative Residency (2-6). Off-campus placement in residency with health care organizations under supervision of a managing preceptor at the site. Prerequisite: Approval of the Coordinator. (F,S,SS)

HSA 6905 Graduate Independent Study (1-6). This course is designed to allow students an opportunity for in-depth literature research or an action-oriented project carried out under the supervision of their faculty advisor. Prerequisite: Permission of faculty advisor. (F,S,SS)

HSA 6930 Professional Seminar in Health Services Management (1). A professional seminar to provide career development skills in preparation for residency or masters project. Prerequisite: Completed 36 credit hours in program. (F,S,SS)

HSA 6977 Masters Research Project (2-6). The student will be field offered the opportunity to conduct a research project on a specific health care management problem in a community or institutional setting. A formal proposal will be prepared and approved by faculty. Students will be expected to demonstrate during the course of this research project that they can implement theoretical knowledge and skills learned earlier in courses on research methods and design. Prerequisite: Permission of advisor. (F,S,SS)

URS 6155 Applied Statistics for Urban Services (3). A broad-gauged introduction to statistical and forecasting tools appropriate for public, non-profit, and health professionals. Course work will stress applications over derivation, with attention paid to how quantitative methods are integrated into organizational analysis and policy making. Prerequisites: PAD 5716 or equivalent. (F,S,SS)

URS 6508 Policy Analysis and Program Planning (3). This course presents techniques and tools for the practice of policy analysis in public, nonprofit, and health organizations, with emphasis on constructing policy analysis useful to decisionmakers. Prerequisites: PAD 5256, and URS 6155 or equivalent. (F,S,SS)

URS 6654 Organizational Design and Change (3). This course provides an overview of organization theory and organization behavior. Emphasis is on contemporary approaches to improving the overall effectiveness of public and health care organizations.

Public Administration

Harvey Averch, Professor

Ronald M. Berkman, Professor and Dean

James Carroll, Professor

Milan Dluhy, Professor of Public Administration and Social Work

Howard Frank, Associate Professor and Coordinator, Doctoral Program

Jean-Claude Garcia-Zamor, Professor

Donald Klingner, Professor

Ralph G. Lewis, Associate Professor

Valerie L. Patterson, Instructor

Allen Rosenbaum, Professor

Barbara Yarnold, Assistant Professor

Master of Public Administration

The Master of Public Administration prepares students for careers in public service and non-profit organizations. It also prepares students for private sector positions having significant contact with public organizations.

The degree provides pre-service and mid-career students with an appropriate mix of technical and generalist skills needed for management and analytic positions in local, state, and federal government, as well as non-profit organizations. Students are given a broad-gauged exposure to the field in the core and subsequently develop expertise within their areas of specialization. The degree also provides students with the necessary analytic and substantive background for successful pursuit of doctoral studies within the discipline. Graduates are well-prepared for positions as city manager, finance director, budget analyst, personnel director, special project coordinator and program analyst.

The Graduate Program in Public Administration is accredited by the National Association of Schools of Public Affairs and Administration. Accreditation by this agency ensures the student that the program has been reviewed and meets the national standards for graduate studies in the field.

Admission Requirements

All applicants must hold a baccalaureate degree from an accredited college or university. In addition, each applicant must have a Graduate Record Examination (GRE) composite score of at least 1000 on the Verbal and Quantitative sections or

a GPA of 3.0 or higher for all college course work at the junior and senior levels. All applicants regardless of previous GPA are required to submit the appropriate test scores.

In addition, applicants must submit: (1) a written personal statement concerning their interest in a career in the field; and (2) a recent writing sample from either their place of employment or previous academic work.

Degree Requirements

The Master of Public Administration (MPA) program requires a minimum of 42 Semester hours, consisting of ten required courses (30 semester hours), and a minimum of four courses within the specialization.

Core Courses

The MPA core consists of the following ten courses:

PAD 6053	Political, Social and Economic Context of Public Administration	3
URS 6155	Quantitative Methods and Analysis	3
URS 6654	Organizational Design and Change	3
URS 6658	Leadership and Decision-making	3
URS 6806	Research Methods and Design Change	3
PAD 6227	Public Finance and the Budgetary Process	3
PAD 6417	Public Personnel Administration	3
PAD 5256	Public Economics and Cost Benefit Analysis	3
PAD 6056	The Practice of Public Management	3
URS 6028	Policy Analysis and Planning	3

PAD 6053, URS 6155, URS 6806, and PAD 5256 must be taken during the first 18 credit hours of course work. Students who cannot demonstrate basic microcomputer literacy should take PAD 5716, Management Support Systems in Public Organizations, prior to enrolling for URS 6155. URS 6155 is a prerequisite for URS 6806. PAD 5256 is a prerequisite for URS 6508.

PAD 6056, The Practice of Public Management, is a capstone experience for the program and must be taken during the last semester of course work.

Grading, Sequencing, and Substitution Policy

Students must maintain a 3.0 GPA to graduate. A grade of 'C' or better is required for every core course. Note: A 'C-' is not acceptable.

The Program reserves the right to withhold the awarding of credit for course work taken out of sequence and without appropriate prerequisites.

Any core course with the exception of PAD 6056 may be waived through petition to the Program Director and MPA Coordinator. The petitioner must demonstrate the equivalence of the previous course work, and prove that their performance met or exceeded core requirements.

Students entering the MPA Program with a Bachelor of Public Administration or equivalent degree may elect to substitute a fifth specialization course or other elective, for PAD 6053. Students who enroll for PAD 5716, Management Support Systems in Public Organizations, may count this towards their area of specialization.

Specializations

At least four more courses (12 credit hours) must be taken in one of the following specializations, which are designed to strengthen the student's knowledge in a specific functional or policy area of public administration.

Human Resource Policy and Management

Students must take four out of the following nine courses:

PAD 5043	Government and Minority Group Relations	3
PAD 5427	Collective Bargaining and the Public Sector	3
PAD 5435	Administrator and the Role of Women	3
PAD 5460	Productivity Improvement	3
PAD 5616	Contracting and Managing Third Party Governments	3
PAD 6418	Seminar in Public Personnel Systems	3
PAD 6419	Seminar in Applied Public Personnel Systems	3
PAD 6436	Professionalism and Ethics	3
PAD 6437	Dynamics of Individual Growth	3

International Comparative and Development Administration

The following two courses must be taken:

PAD 6836	International Public Administration	3
PAD 6838	Development Administration	3

An additional two courses from the Program must be selected from the following:

PAD 6839	Comparative Public Policy	3
PAD 5616	Contracting and Managing Third Party Governments	3
FIN 6626	International Bank Lending and Practices	3
FIN 6636	International Finance	3
MAN 6603	Problems in Comparative Management	3
ECS 5025	Economic Planning	3
ECS 5005	Comparative Economic Systems	3
ECS 5025	Economic Problems of Emerging Nations	3

Urban Management

Students must take the following course:

PAD 6807	Urban and Municipal Government Administration	3
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Students must take three of the following courses:

PAD 6205	Public Financial Management	3
PAD 5616	Contracting and Managing Third Party Governments	3
URS 5655	Strategic Planning in Public and Non-Profit Organizations	3
PAD 5460	Productivity Improvement	3
URS 5657	Continuous Quality Improvement	3
PAD 6816	Regional and State Government Administration	3
URP 5313	Introduction to Urban Planning and Growth Management	3
URP 5505	Economic Development and Urban Revitalization	3
URP 5426	Emergency Management and Planning	3

PAD 6229	Advanced Management Techniques	3
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Law, Society and Policy

Students must take the following four courses:

PAD 5038	Court-Agency Relations	3
PAD 5616	Contracting and Managing Third Party Governments	3
PAD 6605	Administrative Law and Procedure	3
PAD 6436	Public Ethics and Professionalism	3

Outside Specializations

Students who wish to construct their own concentrations in cognate areas of public administration such as criminal justice, environmental and urban systems, economics, gerontology, social work, or anthropology may do so under the following the conditions:

1. A written proposal specifying outside courses and concentration rationale must be presented to the Program Director and MPA Coordinator for approval no later than 15 semester hours into the students course work;

2. Students must satisfy all core requirements for the MPA; and

3. The outside concentration must have a minimum of 12 semester hours in addition to the 30 semester hour core. Pre-service students (those with less than two years post-baccalaureate work experience) are strongly encouraged to enroll in PAD 6946 (Internship) to supplement their academic course work. Students are normally limited to three semester hours of internship credit for their program of studies.

Students seeking to enroll in either PAD 6907 or PAD 6915 for more than three credit hours must obtain permission from the Program Coordinator prior to registration.

Doctor of Philosophy

The Doctor of Philosophy in Public Administration (Ph.D.) is designed to prepare students for senior level positions in public, nonprofit, and health organizations, and to engage in research for academic or other policy analytic positions. The degree provides a sound foundation in current administrative practice in public administration and its cognate disciplines within the School of Policy and Management. Doctoral stu-

dents will be expected to demonstrate significant research capacity in these disciplines, through the writing of a dissertation.

Admission Requirements

Generally applicants must have a Master's degree prior to program enrollment, though outstanding applicants may also be considered with only a baccalaureate degree. Admission is not restricted to students with prior course work in Public Administration and the Program encourages applicants with diverse academic backgrounds.

Admission into the Ph.D. program will be granted to students of superior ability who have demonstrated a record of previous academic success, good potential for continued success in doctoral studies, and a desire to prepare for a career in which scholarship, research, and analysis are major elements. To document these qualities applicants must complete a university application form and submit a written personal statement concerning the reasons for pursuing a Ph.D. in Public Administration, a current resume, official GRE test scores, official transcripts of previous college course work, three recommendations using the Program's recommendation form, and samples of written work. Applicants who reside within a 50 mile radius of Miami must interview with Ph.D. Program Faculty. All students are encouraged to speak with the Ph.D. Coordinator prior to submitting an application.

Generally, an applicant is expected to have, at minimum, a GPA of 3.5 or better for all graduate coursework and a combined score of 1050 on the GRE quantitative and verbal sections, with a minimum of 500 on each of these components. Students whose language of nurture is not English must achieve a minimum of 600 on the Test of English as a Foreign Language (TOEFL). Students must also demonstrate knowledge of American political institutions and fundamentals of social research methods and micro-computers. The admission process is competitive and the Program considers all of the evidence in the application file in making its decision. Meeting the minimum requirements does not guarantee admission and applicants failing to meet the minimum requirements may be admitted based on other evidence of potential.

Admitted students may transfer a maximum of six semester credits

(not included in another degree) from other institutions toward Ph.D. degree requirements. Admitted students must demonstrate competence in inferential and descriptive statistics with regression, applied microeconomics and policy analysis, organization theory and design, social science research methods, personnel and workplace issues, and microcomputer literacy, or take remedial courses in these areas prior to core coursework. All incoming Ph.D. students who have not taken master's level research methods and quantitative skills classes within three years of admission will be given a diagnostic examination in these areas. Students with identified deficiencies will be assigned remedial work specified by the Program.

Financial Aid

The objective of financial aid is to provide direct assistance to those students who require financial assistance to complete their doctoral programs, and to enhance the reputation of the program by attracting an outstanding cadre of students.

To receive financial aid from University and Program sources, doctoral students must be enrolled full-time (9 semester hours during the term in which they receive financial aid). Program assistance is reserved for students with no outside employment.

The exact amount of financial assistance depends upon funding provided by the University and the legislature. The current level of Program assistance is between \$9,000 and \$16,000 annually. Students on assistantships are eligible for matriculation fee waivers paying the bulk of the tuition.

Program financial aid is awarded in one-year blocks, and is generally provided for three years of the student's doctoral study. Non-resident applicants may also apply for waiver of out-of-state tuition by contacting the Program at the time of admission.

The University has a variety of other financial aid opportunities including graduate grants (currently \$800 per semester for in-state students and \$1500 per semester for non-residents), scholarships, loans, work-study programs and targeted scholarships. Information on these and other opportunities are available through the University and College financial aid offices.

To apply for a Program assistance, Students should notify the

Ph.D Coordinator of their intent at the time of application. For matriculation fee waivers and University assistance, students must file the University's Financial Aid Form (FAF) and the other University aid documents. Information on the university procedures is available in the financial aid office of the College of Urban and Public Affairs and in the University's Financial Aid office.

Degree Requirements

To obtain the degree, admitted students must complete at least 69 semester hours beyond the master's degree, or its equivalent, including 45 semester hours of approved course work and 24 hours of dissertation work after admission to candidacy. In addition, there is a residency requirement of at least 18 semester hours in three consecutive semesters of study during the first year of enrollment in the Ph.D core curriculum, and a minimum of six hours required in all subsequent semesters, as set forth in the Doctoral Program in Public Administration Handbook.

Successful completion of course work and passing scores on the comprehensive examination are required before students can advance to candidacy for the Ph.D and present a dissertation proposal. The Doctoral Program in Public Administration Handbook also sets forth benchmarks for student progress in grade point average, course completion, comprehensive examinations and dissertation work.

Program of Study

The Doctor of Philosophy in Public Administration is a 69 semester hour program with eight required courses (27 semester hours); two additional research tools electives (six semester hours); four courses within the student's specialization (12 semester hours); and Dissertation (24 semester hours).

During the first semester of the program, students are required to select, with the assistance and approval of the Ph.D Coordinator, advisory committees chaired by a Program faculty member and including at least two additional members. By the end of the first semester, students are required to develop a program of study with the assistance and approval of their advisory committee, the program director.

Core Curriculum: (27)

PAD 7026	Proseminar in Public Administration and Policy	3
URS 7031	Information and Telecommunications Design and Policy	3
URS 7655	Evaluating Organizational and Program Performance	3
URS 7644	Managing Public Financial Resources	3
URS 7379	Leadership Development and Decision Making	3
URS 7380	Contemporary Management Issues and Problems	3
URS 7157	Applied Research Methods	3
URS 7156	Research Practicum	6

Research Tools Courses: (6)

Students must complete at least six hours of course work (as required by their advisory committee) in research or quantitative methods. The courses are selected with the advice of the student's advisory committee and the program director and must be approved as part of the student's program of study.

Specialization Courses: (12)

Students are required to take four courses in an area of specialization to be designed with the Advisory Committee. Three of these courses must be 5000, 6000, or 7000 level courses to be taken within the University, or specially designed course developed by the student's advisors. One course, URS 7xxx, Supervised Readings, will be required of all students and is to be taken in conjunction with URS 7xxx, Research Practicum, during the last semester of course work prior to sitting for the comprehensive examination.

18 and 36 Credit Hour Review

The student's performance will be carefully monitored at 18 and 36 credit hours, respectively, after full admission to the Program. The Public Administration Doctoral Handbook establishes guidelines and criteria to be employed for the review. Less than satisfactory reviews may result in modified Programs of Study due to remedial course work, or dismissal from the Program.

Students may develop their own specialization in areas of their choice relevant to Public Administration and Public Policy, such as Health Services Administration, Environmental Policy, Urban Planning,

etc. All specializations are developed after consultation with and upon approval of the advisory committee and program director.

Comprehensive Examination

After the completion of all course work, students will be given a written examination, testing their knowledge of Public Administration and Policy Analysis and their specialization. Upon passing the components of the comprehensive examination, the student may apply for advancement to candidacy for the Ph.D.

Students who fail the Comprehensive Examination on the first attempt must retake the examination at its next offering. Students who fail the examination twice are automatically dismissed in accord with general University policy.

Dissertation: (24)

Upon successful completion of the comprehensive examination, students select their dissertation guidance committee and begin preparation of their dissertation proposal. Students are expected to defend their dissertation prospectus before the end of the first semester subsequent to passing the Comprehensive Examination.

Upon the public defense and approval of the proposal, the student will initiate formal work on the dissertation. During this time, the student is expected to make appropriate progress toward completing the dissertation, and to enroll continually (at least six credits per semester) until the degree is completed. Upon completion of the dissertation, candidates will formally defend the research at a meeting conducted by the Dissertation Committee. The degree will be awarded upon a positive recommendation of the Committee and compliance with all policies and procedures required by the university.

Certificates

The Program offers certificates in Human Resource Policy and Management, International Comparative Development Administration, and Public Management. Please refer to the Certificate section under the College for detailed information.

Course Descriptions

Definition of Prefixes

CGS-Computer General Systems; MAN- Management; PAD-Public Administration; PUP-Public Policy; URS-Urban and Regional Studies.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

CGS 6301/MAN 6830 Management Information Systems (3). Introduction to the application of computers to information processing problems in organizations. This includes a survey of the basic computer hardware and software concepts necessary for users to work with information processing personnel. The rudiments of a computer programming language will be taught, and applied to data processing problems. Consideration will also be given to the managerial aspects of information systems planning and development.

PAD 5041 Values and Technology in Modern Society (3). Surveys personal and societal value assumptions in the context of the technological society. Examines organizational-societal value structures, and the ways in which technology creates rapid change and new alternatives in values. Also interrelationship of the past, present and future is explored, through futurism and forecasting techniques. (S)

PAD 5043 Government and Minority Group Relations (3). Explores the pressing contemporary issue of the relationship between government and minorities. Examines the clash between established institutional values and minority group values, and surveys remedial programs aimed at dealing with the problem. Comparative case studies will be used to analyze public agencies' internal relations with minorities (recruiting, selection, etc.), as well as their different responses to the minority groups they serve. (S)

PAD 5256 Public Economics and Cost Benefit Analysis (3). This course provides the quantitative and qualitative tools and case material to solve allocation problems in the public sector. Applied microeconomic theory, welfare economics, and market and government failure are analyzed as are the public alternatives available. Benefit-cost analysis, the ethics of applied practice, and the important skills of communicating with decision makers are taught. (F,S,SS)

PAD 5416 Social Equity and Human Resource Management (3). The course deals with the human resource management issues arising from equity and affirmative action requirements in the workplace. (S)

PAD 5427 Collective Bargaining in the Public Sector (3). The course deals with the nature and implications of collective bargaining for managers and employees in (and students of) public organizations. The course emphasizes similarities and differences between the private and public sectors, as they apply to collective bargaining. (F)

PAD 5435 Administration and the Role of Women (3). The course is designed for women and men who are interested in moving into management positions, or who have done so and want to broaden their understanding of the changing role of women. Classes will allow for experimental as well as academic exploration of the issues. The course will also explore design, implementation, and evaluation of affirmative action programs. (F)

PAD 5443 The Public Administrator and Media Relations (3). Surveys the government-mass communication media relationship, and then concentrates on the ways in which public managers handle media relations. Emphasis throughout is placed on questions of information-handling unique to public organizations, involving, for example, adherence to Florida's Sunshine Law and the Federal Freedom of Information Act. (S)

PAD 5460 Productivity Improvement (3). Provides measures to improve organizational and worker productivity using applied behavioral science. (S)

PAD 5616 Contracting and Managing Third Party Governments (3). Analyzes the legal foundations, administrative and economic characteristics of government instrumentalities as they are used to pursue public policy. Analyzes how and why different combinations of instrumentalities are used in different policy areas. (F,S)

PAD 5660C Applied Legal Context of Public Administrators (3). An overview of constraints and latitude the legal system grants to public administrators and managers. Provides the applied legal information required to make effective decisions in the public sector. (S)

PAD 5661C Management of Court-Agency Relations (3). Examines applied judicial-administrative relations with particular emphasis on administrative policymaking. Covers the legal, environmental, and political factors that influence administrative strategies of policy and program compliance. (S)

PAD 5716 Management Support Systems in Public Organizations (3). The course examines a variety of computer-based management support applications used in public sector organizations. It also explores design and implementation issues endemic to the public sector. (F,S,SS)

PAD 5716L Information Systems for Public Organizations (1). This course will provide an overview of micro-computer and mainframe skills required for substantive coursework in personnel, budgeting, and other core public sector functions. (F,S)

PAD 5934 Contemporary Issues in Public Administration (3). An analysis of major conceptual issues currently facing public administrators. May be repeated. (F,S,SS)

PAD 6042 Democracy and the Administrative State (3). Juxtaposes the contemporary administrative condition of American government with the values of the democratic state. Different approaches to democracy - in practice as well as in theory - will be analyzed, and their implications for public organizations and individual administrators examined. (S)

PAD 6053 Political, Social and Economic Context of Public Administration (3). Examines the context in which public organizations operate, stressing the relationship between such organizations and their multifaceted environment. Emphasis is on examining relevant social and cultural mores and patterns, political values and processes, governmental institutions, economic systems, resource availability, and other environmental factors currently significant to public organizations. (F,S,SS)

PAD 6056 The Practice of Public Management (3). This capstone course for the MPA Program will deploy skills, concepts, and knowledge acquired in previous coursework in analytic exercises related to students' areas of specialization. Prerequisites: Completion of MPA Core; last semester of coursework status. (F,S,SS)

PAD 6106 Organization Theory and Administrative Behavior (3). Historical perspective and philosophical foundations of contemporary and emerging organization theory and administrative behavior, with emphasis on concepts of administrative leadership, the organization's members and systems, group dynamics, socio-psychological aspects of organization and management. (F)

URS 6654 Organizational Design and Change (3). Contemporary approaches to improving the overall effectiveness of public organizations through the utilization of the applied behavioral sciences: personal and executive development programs, team building, action research, etc. Survey of research on the effects of organizational development programs, with special reference to public organizations. (F,S,SS)

PAD 6205 Public Financial Management (3). Capital asset administration, debt administration, revenue systems, public employee retirement programs, purchasing, inventorying, and risk management. (S)

PAD 6224 Advanced Seminar in Public Budgeting (3). A review of the state of the art in public budgeting, emphasizing conceptual areas for significant research and appropriate methodological design for addressing them. Prerequisites: PAD 6227, PAD 6229, and PAD 6205. (S)

PAD 6225 Comparative Public Budgeting (3). Public budgeting is a common activity in all governments and international organizations. Covers the differences in budgeting and explores patterns implicit in those differences. (F)

PAD 6227 Public Finance and the Budgetary Process (3). Examines the theory and practice of public budgeting and its relationship to the administrative processes of control, management and planning. Special emphasis will be given to the social balance question; the kinds and scope of government expenditures; the fiscal role of government in a mixed economy; sources of revenue available to government; administrative, political and institutional aspects of the budget and the budgetary process; and problems and trends in inter-governmental financial relations. (F,S,SS)

PAD 6229 Advanced Management Techniques (3). Explores quantitative revenue and expenditure models and other techniques which

address public sector decision making under conditions of resource constraint. Prerequisites: PAD 5256, 6205 or permission of instructor. (S)

PAD 6366 Policy and Program Implementation (3). This course examines and evaluates the legal, socio-political administrative factors influencing the implementation of public policy and programs. Prerequisite: PUP 6015. (S)

PAD 6417 Public Personnel Administration (3). This course focuses on the fundamentals of public personnel administration applied to general and specific issues of civil service. Some of the specific issues which will be considered are: the merit system and civil service history and development; manpower development and training; the application of the behavioral approach in personnel administration; unique public personnel management problems; governmental unionization and collective bargaining; and future perspectives in personnel administration. (F,S,SS)

PAD 6418 Seminar in Public Personnel Policy (3). This course examines ways in which values, functions, personnel systems and stake holders interact to influence the development of human resource policy and strategic human resource management capability in public agencies. Prerequisites: PAD 6417. (S)

PAD 6419 Seminar in Applied Public Personnel Management (3). Analysis of advanced technique for staffing, productivity improvement and cut-back management; focus on problems faced by federal, state, local and non-profit agencies. Prerequisite: PAD 6417 (F,SS)

PAD 6436 Professionalism and Ethics (3). Examines behavioral approaches toward understanding the personal world of public managers with emphasis on knowledge, skills, and abilities which aid effective goal accomplishment. (F,S)

PAD 6437 Dynamics of Individual Growth (3). This course focuses on the importance of small group theory to the personal growth of the administrator, and the role of interpersonal abilities in effectively serving client groups. The course also deals with the expansion of the phenomenological world view of each student; and will look at existential theory and the dilemma of personal growth. (S)

PAD 6605 Administrative Law and Procedures (3). Emphasizes the responsibilities public administrators have under local, state, and federal laws. Explores such concepts as client responsiveness under the law; the regulatory process; state administrative law systems; the executive order process; the relationship between administrative law and the checks-and-balance system; discretionary justice; and others. (F,S)

PAD 6715 Public Monitoring Systems for Government Organizations (3). Focuses on the formal information system which is or can be used to guide a public organization and judge its performance. (S)

PAD 6807 Urban and Municipal Government Administration (3). Detailed examination of problems facing the municipal administrator; of the pressures upon the contemporary urban environment; and of the administration of large metropolitan areas comprised of numerous entities. Emphasis will be on determination of current trends, discussion of cases, and arrival at suggested solutions. (F,S)

PAD 6816 Regional and State Government Administration (3). Surveys the historical development of regional administration, analyzes present administrative problems of the states, and explores contemporary and suggested remedial policies. Emphasizes the complex problems of the institutional relationships among local, state and regional governments, and their implications for public policy-making. (S)

PAD 6836 International Public Administration (3). The role of public administration systems around the world; and the impact of political and socio-cultural frameworks on administration. Focus on national and state organizations' politics, economics, problems, and possibilities. A review of scope and programs of contemporary international public administration organizations. (F)

PAD 6838 Development Administration (3) The role of public administration in national development, with specific attention to theories of economic aid from external sources, and the effects of this aid. Theories and policies of economic and social development are explored; and particular attention is given to the role of the United States in strengthening administrative capabilities as an important means for achieving

developmental goals in selected countries. (S)

PAD 6839 Comparative Public Policy (3). This course addresses policy formulation and implementation as a general process of administrative action that can be investigated among the varying nation-states. It covers the differences in policy and explores patterns implicit in those differences. Prerequisite: PAD 6836 or PAD 6838. (S)

PAD 6907 Independent Study in Public Administration (1-6). (Normally 3 credit hours) Individual conferences; supervised readings; reports on personal investigations and similar undertakings. Prerequisites: Completion of required courses in public administration is expected. Consent of faculty sponsor and Program Director required. (F,S,SS)

PAD 6915 Independent Research in Public Administration (1-6). (Normally 3 credit hours) An individualized research project and report which, if feasible, should include field work with a public organization. Prerequisites: Completion of required courses in public administration is expected. Consent of faculty sponsor and Program Director required. (F,S,SS)

PAD 6946 Public Administration Internship (1-6). (Normally 3 credit hours) Supervised work in a public or quasi-public organization. Should not be undertaken until completion of required courses in public administration program. Consent of faculty advisor and Program Director required. (F,S,SS)

PAD 7026 Proseminar in Public Administration and Policy (3). An intensive introduction to American Public Administration and Public Policy making and implementation by "The Fourth Branch" of government. (F)

PAD 7055 Scope and Theory of Public Administration (3). An integrative capstone seminar in which traditional Models of Public Administration are explored and employed to analyze the structures and dynamics of public organizations and to develop alternative Models and new theoretical perspectives concerning the scope and theory of the field. (S)

PAD 7102 Advanced Organization Theory (3). Philosophical foundations of contemporary organization theory, with emphasis on dynamic interfaces between the environ-

mental contexts and organizations, critical analysis of both the normative and incremental orientation of concepts, theories, models, and applications. Prerequisite: PAD 6106 or equivalent. (S)

PAD 7257 Economic Context of Government (3). This course examines interdisciplinary approaches to collective decision making and the delivery of public goods and services. Prerequisite: PAD 5256.

PAD 7607 Legal Context of Public Administration (3). This course analyzes the administrative significance of delegation, judicial review, rule making, freedom of information and sunshine laws, legislative veto, and liability for administrators. Prerequisite: PAD 6053. (F)

PAD 7702 Empirical Methods in Public Administration (3). An advanced research/seminar practicum focusing in the development of theoretical models relevant to public administration and analytical techniques for testing these models. Particular attention is paid to structural equation models and latent measures. (S)

PAD 7705 Applied Quantitative Analysis (3). Application of selected multivariate statistical and quantitative models to the field of public administration. Prerequisite: URS 6155. (S)

PAD 7707 Advanced Applied Research Methods (4). This course will provide students with an increased understanding of concepts of research methods through applied research projects related to public policy and public administration. Prerequisites: URS 6155 and URS 6806. (F)

PAD 7980 Dissertation (1-12). This course provides dissertation guidance to doctoral candidates in the Ph.D. program in public administration. Prerequisite: Ph.D. candidacy in Public Administration. (F,S,SS)

PUP 6006 Public Policy Analysis and Evaluation (3). A framework for evaluating public policy-making will be presented. The emphasis will be on criteria and methodologies available for choosing among alternative courses of action. The systems approach, alternative futures, and nth-order consequences of policies will be analyzed. (S)

PUP 6015 Public Policy (3). An intensive analysis of the normative theories of public policy making, with

emphasis on the processes by which policy choices are made and implemented by government agencies. The current trends and perspectives of effective policy development (such as participatory democracy, multi-valued choice, etc.) are examined. (F)

URP 5314 Introduction to Urban Planning and Growth Management (3).

An historic overview of land use planning and the rise of growth management with emphasis on implementation in complex market and political environments. (F,S)

URP 5426 Emergency Management and Planning (3).

This course focuses on the concepts, processes, and techniques associated with developing and implementing emergency management plans in public, non-profit, and health organizations. (F)

URS 5505 Economic Development and Urban Revitalization (3).

This course is an interdisciplinary examination of research and practice in contemporary economic development, with emphasis on successful implementation in a variety of settings. (F)

URS 5645 Strategic Planning in Public and Non-Profit Organizations (3).

This course exposes students to the concepts associated with strategic planning of public and nonprofit organizations and provides them with practical experience in their use. (S)

URS 5647 Continuous Quality Improvement (3).

This course provides an in-depth exposure to the concepts, principles, and techniques associated with continuous quality improvement (CQI) applied to public, nonprofit, and health organizations. (S)

URS 6028 Policy Analysis and Program Planning (3).

This course presents techniques and tools for the practice of policy analysis in public, nonprofit, and health organizations, with emphasis on constructing policy analysis useful to decisionmakers. Prerequisites: PAD 5256, and URS 6155 or equivalent. (F,S,SS)

URS 6033 International Telecommunications Policy (3).

An exploration of the major technical, regulatory, and economic issues impacting telecommunications policy; discussion of analytic frameworks for policy adoption.

URS 6155 Applied Statistics for Urban Services (3). An intensive introduction to statistical and forecasting

tools appropriate for public, non-profit, and health professionals. Prerequisites: URS 4112 or equivalent.

URS 6378 Leadership and Decision-making (3).

Readings and case studies examine how effective leaders in the public and non-profit sectors make decisions in fluid and challenging environments. (F,S)

URS 6806 Research Methods and Design (3).

Theories and concepts of research and evaluation. Specific focus given to action components of the research process: design and formulation, strategies and methodological tools for conducting research. Discussion of the role of research in administrative decisions and in testing ways to implement public policy. A review of contemporary critiques on research design. Prerequisite: URS 6155. (F,S,SS)

URS 7031 Information and Telecommunications Design and Policy (3).

The managerial and public policy implications of innovations in the 'information super highway'; establishment of intra and interorganization capacity for dealing with continued development in the field. Prerequisites: Ph.D. status or permission of instructor.

URS 7156 Research Practicum (6).

An integrative studio course intended to produce a defensible dissertation prospectus and significant empirical research project; may be repeated for credit. Prerequisites: Completion of Ph.D. tool requirement, and URS 7157.

URS 7157 Applied Research Methods (3).

Extensive exploration of designs utilized in contemporary social and policy science research with emphasis on triangulated models. Prerequisites: Completion of tools requirement in program of studies or permission of instructor.

URS 7379 Leadership Development and Decision-Making (3).

Leadership as the focal point for organizational development, resource allocation, and 'fit' within the environment; emphasis on effective leadership in the public, health, and nonprofit sectors. Prerequisites: Ph.D. status or permission of instructor.

URS 7380 Contemporary Management Issues and Problems (3).

A proseminar on workplace issues such as AIDS, the Americans with Disability act, and 'the Glass Ceiling'. Special emphasis on diversity and increased utilization of contractual

employees. Prerequisites: Ph.D. status or permission of instructor.

URS 7644 Managing Public Financial Resources (3).

An integrative seminar treating taxation, public budgeting, debt management, and evaluation, in the context of a globally competitive economy. Prerequisites: Ph.D. status or permission of instructor.

URS 7655 Evaluating Organizational and Program Performance (3).

Methodology and conceptual frameworks needed to augment organizational effectiveness while enhancing the accountability of public, health, and nonprofit organizations. Prerequisites: Ph.D. or permission of instructor.

URS 7926 Supervised Readings (3).

Extensive reading and review in area of concentration taken in preparation for comprehensive examinations; supervised by Chair of Program Advisory Committee, may be repeated for credit. Corequisite: URS 7156.

School of Social Work

Karen Sowers-Hoag, Associate Professor and Director
Velmarie Albertini, Instructor and Student Services Coordinator and Acting MSW Coordinator
L. Yvonne Bacarisse, Associate Professor and Associate Dean for Undergraduate Studies
Stan L. Bowie, Assistant Professor
Scott Briar, Professor and Director, Institute for Children and Families at Risk
Arlene Brown, Instructor and Field Coordinator
Andres Gill, Assistant Professor
Paul Gallant, Assistant Professor
Mary Helen Hayden, Assistant Professor and Undergraduate Coordinator
Michael Kolevzon, Professor
Jordan Kosberg, Professor and Ph.D. Coordinator
Rosa Jones, Associate Professor and Vice Provost
Monte Koppel, Professor
Welker Mitchell, Instructor and Director, Professional Development Center
Carol Odell, Instructor and Field Director
Miriam Potocky, Assistant Professor
Magaly Querall, Associate Professor
Rich Renz-Beaulaurier, Assistant Professor
Betsy Smith, Associate Professor
Martin Sundel, Professor

The School of Social Work offers graduate and undergraduate studies leading to the Master's and Bachelor's degrees in Social Work. The School also offers a Ph.D. in Social Welfare.

This profession requires a high degree of knowledge, skill, and dedication. The desire and ability to work effectively with people and to help solve social problems; demands a scientific understanding of society and human behavior; skills of social work practice, and identification with the values of the profession.

Master of Social Work

The School offers an integrated program that leads to the degree of Master of Social Work. The program is designed to give the student professional education for the advanced practice of social work. All students will be required to acquire or to possess the common base in the areas of professional study considered essential in social work education: human behavior and the

social environment, social welfare policies and services, research, and social work practice. The knowledge acquired in the professional courses will be applied in supervised field experiences in social agencies.

The program offers an advanced concentration in direct services to individuals and Families. Students complete a field practicum program that supports practice in the specialized field. With the help of faculty, students will develop individualized programs in the concentrations that seem most likely to meet their educational needs and contribute to their professional objectives.

For additional information regarding the graduate social work program of study and degree requirements, contact the School directly.

The Master's program is accredited by the Council on Social Work Education. And educationally prepares students for the required content for clinical licensure in Florida.

Admission Requirements

Applicants to the graduate program are required to meet the minimum standards set forth by the Florida Board of Regents and the graduate social work program. This includes a combined score of 1000 on the Verbal and Quantitative Aptitude Tests of the Graduate Record Examination or at least a 3.0 average in all upper-level division work. Application procedures for admission to graduate study are found in the discussion of University procedures for admission to graduate study in the current catalog. An application to the Social Work graduate program, a personal narrative, and three letters of reference are required for admission. A personal interview may be requested. All applicants should have had college-level courses in biology (including coverage of Human Biology) and statistics and 12 semester hours in the social and behavioral sciences.

Applicants with a B.S.W. degree from a program accredited by the Council on Social Work Education will be considered for admission to advanced standing. Applicants for the advanced standing program will not be awarded any transfer credit, substitutions, or exemptions. Advanced standing is not automatically granted. It is subject to successfully completing the advanced standing prerequisite course requirements with grades of 'B' or higher. Admission to the second year con-

centration will be governed by successful completion of these additional requirements to the minimum standards set forth by the Florida Board of Regents and the graduate Social Work program.

In addition to the College and University policies governing transfer credit the following regulations apply:

1. Courses taken at a CSWE accredited graduate school of social work in which the applicant was fully admitted, may be transferred up to a maximum of 30 semester hours.
2. Graduate courses taken in other than accredited social work programs and that were not used to satisfy the requirements of another degree may be transferred up to a maximum of six semester hours.
3. Students in the advanced standing program will not be awarded transfer credits.
4. Required concentration courses are not transferable.

Degree Requirements

The Master of Social Work program is a 60 semester hour program composed of 30 semester hours of the required common base in the first year and 30 semester hours of concentration courses in the second year. The advanced standing Master of Social Work is composed of 11 semester hours of prerequisite courses and 30 semester hours of concentration courses. The Advanced Standing Block must be successfully completed before advancing to the second year.

An overall GPA of 3.0 is required for graduation. Any required course in which a student receives a grade lower than 'B' must be retaken. (A grade of 'B-' is not acceptable.) A passing grade in field courses is required for continuation in the program. Field courses cannot be repeated.

A student must successfully complete all work applicable to the Master of Social Work program within 48 months from initial admission. In unusual circumstances, and if the reasons warrant it, a student may petition the School Director for an extension of the time limit.

First Year**Required Courses: (30)**

SOW 5105	Human Behavior and the Social Environment I	3
SOW 5125	Human Behavior and the Social Environment II-Psychopathology	3
SOW 5235	Social Welfare Policy and Services	3
SOW 5324	Theory and Practice with Groups	3
SOW 5342	Practice with Individuals and Families	3
SOW 5344	Theory and Practice with Communities and Organizations	3
SOW 5404	Social Work Research Methodology	3
SOW 5532	Field Practicum I	6
SOW 5542	Integrative Field Seminar I	1
Elective		3

Advanced Standing**Required Prerequisite Courses: (11)**

SOW 5125	Human Behavior and the Social Environment II-Psychopathology	3
SOW 5324	Theory and Practice with Groups	3
SOW 5541	Advanced Standing Seminar	2
Elective: A Direct Practice Course		3

Following successful ('B' or better) completion of these prerequisite courses, advanced standing students are admitted to the second year. (A grade of 'B-' is not acceptable)

Second Year

The concentration year is under revision. Students should anticipate changes in the 6000 level courses and requirements.

Concentration Requirements: (30)**Services to Individuals and Families**

SOW 6243	Advanced Policy	3
SOW 6281	Legal Aspects of Social Work Practice	3
SOW 6351	Advanced Intervention Strategies I	3
SOW 6435	Evaluative Research in Social Work	3
SOW 6655	Advanced Intervention Strategies II	3
SOW 6535	Field Practicum II	8
SOW 6543	Integrative Field Seminar II	1
Elective		6

Doctor of Philosophy in Social Welfare

The Doctor of Philosophy in Social Welfare (Ph.D. in Social Welfare) is designed to prepare students for active research careers and leadership roles in social welfare, social work, and social work education. The major purpose of the program is the development of research knowledge for the design, testing and implementation of effective interventions for social problems at all levels of intervention from direct practice to social welfare policy.

The overarching emphasis in the Ph.D. program is on research to develop more effective interventions to address the social problems and meet the human needs of multicultural populations and communities. Students will pursue individualized courses of study focused on an area of specialization related to the social problems and levels of intervention of particular interest to the student. Mastery of state of the art research methodologies and data analysis techniques is a key part of the program, and students will have an opportunity to conduct intervention research under the direction of experienced faculty members. Preparation for teaching is also offered in the program.

Admission Requirements

Admission to the Ph.D. program in Social Welfare will be granted to students of superior ability who have been admitted to the graduate program of Florida International University. Applicants are required to submit:

1. A Master's degree in Social Work from an accredited school of social work, or in a closely related field.
2. Evidence of superior academic achievement in undergraduate and graduate education, including a 3.5 undergraduate GPA.
3. Documentation of completion of a course in statistical methods with a grade of 'B' or better.
4. Students for whom English is a second language must have a TOEFL score of 550 or higher;
5. Three letters of recommendation (two academic and one professional);
6. Three examples of written scholarly work;
7. A personal statement describing the applicant's professional and research interests and objectives.

All applicants must be approved by the Doctoral Committee. Applications for Fall semester admission are due by April 30 of the year of application.

Degree Requirements

To be awarded the Ph.D. degree, admitted students must complete two years of full-time course work plus a dissertation. The curriculum includes courses and seminars on theories of intervention, research priorities in social work and social welfare, issues in social welfare policy, research methodology, quantitative methods, and an individualized course of study in the social and behavioral sciences. Students will have the opportunity to select courses and tutorials with social work faculty on topics related to the student's specialized social problem and intervention interests. Other degree requirements include:

One year of residency, (i.e., completion of at least two consecutive semesters of full-time study during the first year following admission to the Ph.D. program); Successful passage of faculty review at the end of the first year; Successful completion of all course work required by the Supervisory Committee with a grade of 'B' or higher; Passing scores on written and oral comprehensive examinations; Under the guidance of a Dissertation Committee, selection of a dissertation topic, preparation of an acceptable dissertation research project, completion of dissertation research, and defense of the dissertation.

Program of Study

The Doctor of Philosophy in Social Welfare is a 64 semester hour program comprised of 11 required core courses, 3 required elective courses and 24 semester hours of dissertation study.

Course Offerings

SOW 5932	Seminar in Social Work: Social Systems	3
SOW 7215	Social Welfare Policy Seminar	3
SOW 7237	Social Welfare Research Priorities I	3
SOW 7238	Social Welfare Research Priorities II	3
SOW 7492	Research Methods in Social Welfare I	3
SOW 7493	Research Methods in Social Welfare II	3
SOW 7494	Advanced Social Welfare Research (elective)	3

SOW 7916	Supervised Research	6
SOW 7935	Advanced Seminar in Social Welfare	3
SOW 7936	Dissertation Seminar in Social Welfare	3
SOW 7939	Seminar on Social Work Education	3
SOW 7980	Dissertation Research	24
STA 6166	Statistical Methods I	3
STA 6167	Statistical Methods II	3

Course Descriptions

Definition of Prefixes

SOW - Social Work.

F-Fall semester offering; S-Spring semester offering; SS-Summer semester offering.

SOW 5105 Human Behavior and the Social Environment I (3). Study of individuals and families with emphasis on the analysis of bio-psycho-socio-cultural factors (including racial/ethnic and gender variables) affecting human development and social functioning through the life cycle. Prerequisites: 12 semester hours of college-level courses in the social and behavioral sciences and one college-level course in biology (including coverage of human biology).

SOW 5109 Crises in the Lives of Women (3). An overview of special experiences in the lives of women which might lead women to seek professional assistance. Topics include pregnancy, rape, abortion, childbirth, sex discrimination, climacteric, widowhood. Prerequisite: Senior or graduate standing.

SOW 5125 Human Behavior and the Social Environment II-Psychopathology (3). Study of the psychosocial aspects of client problems, including psychopathology, frequently encountered by social workers in direct practice with attention to differential treatment issues. Prerequisite: SOW 5105. (S,SS)

SOW 5235 Social Welfare Policy and Services (3). This course analyzes major social welfare policies and programs in the United States, their emergence, development, contemporary operations and how they shaped the development of the Social Work profession. (F)

SOW 5324 Theory and Practice With Groups (3). Study and application of biopsychosocial, cultural dimensions, theories, techniques and intervention strategies for social work

group practice. Prerequisites: SOW 5342 and SOW 5344. Corequisite: SOW 5532 and SOW 5542 (for first year students) or SOW 5541 (for advanced standing students).

SOW 5342 Social Work Practice with Individuals and Families (3). With methods of social work practice individuals and families, with emphasis on professional values, interviewing skills, assessments and interventions, within a cross-cultural perspective. Corequisite: SOW 5105.

SOW 5344 Theory and Practice with Communities and Organizations (3). Study and application of biopsychosocio-cultural dimensions, theories, techniques and intervention strategies for communities and organizations. Focuses on empowerment of populations at risk and promotion of social and economic justice. Prerequisites or Corequisites: SOW 5342 and SOW 5105. (S,SS)

SOW 5354 Crisis Intervention in Social Work Practice (3). This course examines the etiology, structure, theory, and application of crisis intervention in social work practice. It provides assessment criteria for assignment to this form of treatment and techniques for intervention. Prerequisite: Senior or graduate level practice course, or permission of instructor.

SOW 5404 Social Work Research Methodology (3). This course provides information on the principles and methods of basic social work research. The ethical conduct of research is taught within the context of social work purposes and values. The formulation of problems for study that address the social needs of diverse population groups is emphasized. Prerequisite: Statistics. (F,S)

SOW 5532 Field Practicum I (6). A supervised educational field experience in an agency setting for a minimum of 384-clock hours designed to provide students opportunities to develop and apply generic practice skills in working with individuals, families, groups and communities. Prerequisites: SOW 5105, SOW 5344, SOW 5404, SOW 5235, SOW 5342. Corequisites: SOW 5125 (must be taken as a pre or corequisite), SOW 5324, SOW 5542. (S,SS)

SOW 5541 Advanced Standing Seminar (1). This course examines the integration of academic knowledge and social work skills that develop the profession's critical thinking foundation. Prerequisites or

Corequisites: SOW 5125, SOW 5324. (SS)

SOW 5542 Integrative Field Seminar I (1). This bi-weekly seminar, taken concurrently with the first field practicum (SOW 5532), requires students to analyze their field experience and integrate theory and practice. It provides an arena for students from various settings to come together in order to provide a richer understanding of social services at all levels. Majors only. Corequisites: SOW 5532 and SOW 5324. (S,SS)

SOW 5605 Medical Social Work (3). Principles of medical social work required in hospitals and communities. Focus on the social worker as part of the health care team, with basic knowledge of medical problems of patients and their families. Prerequisite: Graduate or senior standing.

SOW 5614 Social Work Practice with Persons Affected by Domestic Violence (3). Course prepares students to appropriately identify, assess, and intervene with persons affected by domestic violence utilizing assessment and intervention strategies in practice. Prerequisite: Practicum I/Methods I.

SOW 5621 Social Work with Refugees, Immigrants, and Migrants (3). Provides skills and knowledge responsive to the needs of immigrants and refugees and addresses influences of cultural, ethnic, gender, age, and class differences in acculturation and service delivery. Prerequisite: Practicum I/Methods I.

SOW 5624 Feminist Therapy in Social Work (3). Reviews basic principles of feminist therapy and focuses on the application of feminist therapy in clinical social work practice. Prerequisite: Graduate standing or permission of instructor.

SOW 5635 School Social Work Practice (3). Designed to assist students in developing knowledge and skills necessary for effective social work practice in school settings. Promotes understanding of social work practice to improve the functioning of children. Prerequisites: SOW 5342 or permission of instructor.

SOW 5641 Understanding the Process of Aging (3). Study of the physical, psychosocial, and cultural factors affecting human development in late life, from a social work perspective. Prerequisites: Gradu-

ate or senior standing and permission of instructor. (F)

SOW 5665 Animal Assisted Treatment for Social Work (3) An introduction to the human animal bond and animal assisted treatment. There will be illustrations of programs using small animals, horses, and dolphins. Prerequisites: SOW 3313 or SOW 5342 or permission of instructor.

SOW 5689 Social Work Practice with Sexual Problems (3). Skills applicable to sex-related concerns encountered in social work practice. Presents theories of the etiology of common sexual problems and explores treatment intervention modalities. Prerequisite: Graduate or senior level practice course or permission of instructor.

SOW 5710 Chemical Dependency and Social Work (3). An overview of chemical dependency in the social service delivery system including policy and program approaches, client assessment, treatment techniques and prevention issues. Prerequisites: SOW 4322 or SOW 5342 or permission of instructor.

SOW 5845 Counseling the Elderly (3). Applied gerontological knowledge to counseling skills required for independent as well as frail elderly clients. Course focuses on long and short term interventions in a range of practice settings. Prerequisite: SOW 5641 or permission of instructor.

SOW 5905 Individual Study (1-3). Individually selected program of advanced supervised study related to specific issues in social work and social welfare. Prerequisite: Permission of instructor. (F,S,SS)

SOW 5932 Seminar in Social Work (3). An exploration of various critical issues of concern to the social work profession. Prerequisite: Graduate or senior standing.

SOW 6243 Advanced Policy (3). A comprehensive overview of the range of individuals and family policies, programs and issues in the U.S.A. in the context of comparing residual and institutional approaches to social service delivery, and policy implications for use of each approach. Prerequisite: Admission to concentration. (F)

SOW 6247 Housing and Environmental Needs (3). Examination of housing and broader environmental needs of individuals and families. Focus on needs for security, mobility, privacy, affiliation, and self esteem.

Particular attention to the role of the professional social worker in meeting environmental needs. Prerequisites: SOW 5641 and SOW 6245.

SOW 6281 Legal Aspects of Social Work Practice (3). Introduction to legal aspects of social work practice including client and agency rights, malpractice issues, legal research, and practice interaction with legal counsel, legal services, and the courts. Prerequisite: admission to concentration. (F)

SOW 6351 Advanced Intervention Strategies I (3). This course will provide students with an understanding and application of the major models of social work intervention in working with individuals and families, with critical analysis skills in assessing functioning across the life span and in implementing intervention techniques. The influence of cultural/ethnic differences and how these may affect family relationships and functioning will be assessed. Prerequisite: Admission to concentration. (F)

SOW 6359 Social Work Treatment with Families of the Elderly (3). Preventive and treatment approaches in social work practice with families of the elderly. Focus on aging family as client-system; knowledge, skills needed for a range of interventions are provided. Prerequisites: SOW 5641, SOW 6646.

SOW 6372 Supervision, Consultation and Staff Development (3). Key aspects of the social services supervisory situation are explored. This course emphasizes supervisory competence, issues facing supervisor and supervisee. Also explores consultation and staff development. Prerequisite: Admission to a concentration or permission of instructor.

SOW 6386 Social Program Planning and Development (3). Theory and practice of social program planning and development for organizations and communities. Social services to families, children and elderly, especially service needs for which programs do not exist will receive special emphasis. Prerequisite: Admission to a concentration, or permission of instructor. (F)

SOW 6387 Social Services Management Skills (3). Learning units in which students practice and demonstrate, through simulation and participation, skills in major aspects of social services management. Pre-

requisite: Admission to a concentration or permission of instructor.

SOW 6435 Evaluative Research in Social Work I (3). This course focuses on research designs for evaluating social work practice and social programs. The ethics, politics, and conduct of evaluative research are taught within the context of the purposes, values, and ethics of professional social work practices. Prerequisite: Admission to concentration, or permission of instructor. (F,S)

SOW 6436 Empirically-Based Practice in Social Work (3). Advanced utilization of intervention effectiveness research results and techniques in social work practice with individuals, families and groups. Prerequisites: SOW 6435 and an advanced practice course in a concentration.

SOW 6535 Field Practicum II (8). This field practicum is a 516-clock hour supervised educational experience in an agency setting designed to provide the student with an opportunity to develop and practice social work skills in the student's area of concentration. Majors only. Prerequisites or Corequisites: Admission to concentration, SOW 6281, SOW 6281, SOW 6243, and SOW 6351. Corequisites: SOW 6543, SOW 6655, and SOW 6435. (S,SS)

SOW 6543 Integrative Field Seminar II (1). This bi-weekly field seminar taken concurrently with the specialization field practicum in the concentration area requires students to analyze their field experience and integrate theory and practice. It provides an arena for various settings to come together in order to provide a richer understanding of social services. Majors only. Prerequisites or Corequisites: Admission to concentration, SOW 6281, SOW 6281, SOW 6243, and SOW 6351. Corequisites: SOW 6543, SOW 6655, and SOW 6435. (S,SS)

SOW 6611 Advanced Practice with Family Systems (3). Advanced clinical skills in working with families and couples. Focus will be given to non-traditional change strategies such as family sculpting, family reenactment, family choreography and dramatization. Extensive use of video taped case simulations, co-therapy, live supervision and peer evaluation models. Prerequisite: SOW 6351 or permission of instructor.

SOW 6646 Social Work Practice with the Elderly (3). The knowledge and skills necessary for advanced social work practice in social agencies which deal with problems and issues of the aging population in contemporary society. Pre- or Corequisite: SOW 5641 and admission to concentration. (F)

SOW 6647 Advocacy in Social Work Practice (3). This course covers skills and knowledge necessary for the practice of advocacy on behalf of individuals and groups, including political, legislative, and organizational perspectives. Prerequisites: Admission to a concentration or permission of the instructor.

SOW 6649 Social Work Practice in Long Term Care and the Elderly (3). This course focuses on direct practice with the frail elderly and their families within the rapidly changing system of community and institutional long term care. Prerequisites: SOW 5641 and SOW 6646. (S)

SOW 6655 Advanced Intervention Strategies with Individuals and Families (3). This course will provide students with the opportunity to select, apply and evaluate appropriate interventive strategies in working with individuals and families. Specific attention to socio-cultural, gender and racial differences in understanding development issues and in critically assessing the applicability of practice theories. Prerequisite: Admission to concentration. Corequisite: SOW 6535 or an MSW degree. (S)

SOW 6656 Decision-Making in Child Placement (3). This course will stress decision-making and interventions when substitute care is considered or carried out. Termination of parental rights and the choice and timing of placements of children will be considered. Prerequisite: Admission to concentration or permission of instructor.

SOW 6914 Independent Research (1-6). Individually selected program of supervised data collection and analysis on specific topics in social work and social welfare. Prerequisite: SOW 5404 and permission of instructor. (F,S,SS)

SOW 7215 Social Welfare Policy Seminar (3). This course analyzes the history and evolution of social welfare policy in the U.S. and examines the major theories and frameworks used to analyze social welfare policy. Prerequisite: Admission to Ph.D.

program or permission of instructor. (F)

SOW 7237 Social Welfare Research Priorities I (3). Analysis of research priorities in the development of effective interventions in the social welfare field. Prerequisite: Admission to Ph.D. program or permission of instructor. (F)

SOW 7238 Social Welfare Research Priorities II (3). This course focuses on intervention research and methods at the community, organizational and societal level. Prerequisite: SOW 7237. (S)

SOW 7492 Research Methods in Social Welfare I (3). Research purposes and methods concentrating on design, measurement, hypothesis testing, intervention assessment and analysis. Prerequisite or Corequisite: STA 6166 or equivalent. Prerequisite: Admission to Ph.D. program or permission of instructor. (S)

SOW 7493 Research Methods in Social Welfare II (3). This second course in a two-semester sequence focuses primarily on design, measurement, and analysis issues in ethnographic field studies, surveys and group experiments for the evaluation of intervention technology in social welfare. Prerequisites: SOW 7492, and STA 6166, or equivalent. (SS)

SOW 7494 Advanced Social Welfare Research (3). Advanced research designs and data analysis techniques for use in developing interventions in social welfare. Prerequisites: SOW 7492 and SOW 7493. (F)

SOW 7916 Supervised Research (3). Directed experience in the conduct of research in social welfare and social work under the guidance of a faculty member. Must be taken twice for a total of six credits. Prerequisite: Completion of first year. (F,S)

SOW 7935 Advanced Seminar in Social Welfare (3). Course analyzes issues of contemporary interest to the field of social welfare. Emphasis is placed on examination of issues from a multi-level perspective. Prerequisites: SOW 7215, SOW 7237, SOW 7238, SOW 7492, and SOW 7493. (F)

SOW 7936 Dissertation Seminar in Social Welfare (3). This course focuses on helping students with the development of the dissertation prospectus. Emphasis is placed on development of an acceptable re-

search protocol in the students' specialization area. Prerequisites: SOW 7215, SOW 7237, SOW 7238, SOW 7492, and SOW 7493. (S)

SOW 7980 Dissertation (3-12). This course provides dissertation guidance to doctoral candidates in the Ph.D. program in Social Welfare. Prerequisite: Ph.D. candidacy in Social Welfare. (F,S,SS)

Certificate Programs

Criminal Justice

Graduate Certificate in Justice Administration and Policy Making

The Graduate Certificate in Justice Administration and Policy Making is a professional certificate designed to complement a range of professional activities, academic programs, and degrees in the field of criminal justice. The goals of the program are (1) to stimulate interest in the study of justice administration and policy making at the graduate level, (2) to promote graduate studies with a concentration in criminal justice, and (3) to provide practitioners in the field of criminal justice with a cluster of courses leading to a specialization in criminal justice.

Admission

Students must have a bachelor's degree from an accredited college or university. Students must be admitted to the certificate program by the Program Coordinator, who will serve as their faculty advisor. Admission to the graduate certificate program does not ensure admission to the Master's Degree in Criminal Justice (MSCJ) program. NOTE: Those students who apply for and are admitted to the Master of Science in Criminal Justice degree program may have their Certificate courses with a grade of 'B' or better credited toward the Master of Science in Criminal Justice degree.

Program of Study

A total of 15 successfully completed semester hours is required for the award of the Graduate Certificate in Justice Administration and Policy Making. Students must complete their program of study within three years from the date of their admission and receive no less than a 3.0 GPA in their program of study.

Core Required Courses

CCJ 5288	Legal Issues for Criminal Justice Administrators
CCJ 6058	Theory in the Administration of Justice
CCJ 6456	Administration and Management of Justice Agencies
CCJ 6716	Planning and Program Evaluation

Optional Courses

Select one of the following courses: substitution may be made with the approval of the faculty adviser.

CCJ 5605	Deviance and Social Control
CCJ 5935	Special Topics
CCJ 6477	Seminar in Information Systems

Law and Criminal Justice Certificate

The Law and Criminal Justice academic certificate is designed to provide legally-conscious students with concepts and information utilized by law professionals. Study shall include casework, procedures, court processes, research methods, and other introductory coursework designed to enhance careers in the legal profession.

Admission

Students must be fully admitted to the Bachelor of Science degree in Criminal Justice or another bachelor degree program.

Certificate Award

The Certificate will be awarded upon completion of the required certificate courses and the bachelor degree requirements. The certificate will be posted on the student's transcript at the time the completion of the bachelor degree requirements is posted.

Required Criminal Justice Courses

The student shall complete a minimum of 18 semester hours of the following selected criminal justice courses with a minimum grade of 'C' in each course. Core criminal justice courses will not count for Criminal Justice majors.

CCJ 3271	Criminal Procedure	3
CCJ 3290	Judicial Policy Making	3
CCJ 3291	Judicial Administration	3
CCJ 4032	Crime and the Media	3
CCJ 4252	Criminal Justice and the Constitution	3
CCJ 4280	Law and Criminal Justice	3
CCJ 4282	Legal Issues in Corrections	3
CCJ 4752	Legal Research	3
CCJ 5216	Criminal Law	3
CCJ 5235	Criminal Procedure	3
CCJ 5286	Comparative Law	3

Health Services Administration

Certificate in Gerontology

The objective of the certificate is to provide graduate students and qualified practitioners in the field of aging with a range of gerontological courses leading to a specialization in gerontology to supplement their chosen disciplines. Through provision of an in-depth understanding of the bio-socio-psychological nature of the aging process, and the relation of political and economic resources, the program's long range objective is to increase the knowledge and sensitivity of professionals in this area, and thereby improve the service delivery system for the increasingly large population of elderly Floridians.

Admission

Students must have a bachelor's degree and be admitted to the program by the Program Coordinator who will serve as their faculty advisor.

Program of Study: (18)

SOW 5641	Understanding the Process of Aging	3
NGR 5250	Physical Change and Healthy Aging	3
HSA 5226	Management of Long Term Care Systems	3

The balance of four courses to be selected from the following areas of concentration. Students who have not had direct practice with older people will be required to select an Individual Study course which will include 225 hours of practicum experience.

Long Term Care Administration

HSA 5225	Long Term Care Management I	3
HSA 5226	Management in Long Term Care	3
HSA 5227	Long Term Care Management II	3
HSA 5454	Ethical Decision Making in Health Services Administration	3
HSA 5816	Practicum in Long Term Care Management	3

Aging and Rehabilitation

OTH 5600	Study of Gerontology as Related to Occupational Therapy	3
OTH 5613	Interdisciplinary Approach to Aging	3

OTH 5630	Occupational Therapy Assessment of the Elderly	3
OTH 5764	Research (topic selected in <i>Geriatric Clinical Specialty</i>)	
OTH 5905	Independent Study (variable credit)	
PTH 6238	Motor Development: Adult Through Geriatrics	3
PTH 6239	Adult Congenital Handicapping Conditions	3

Psychology of Aging

DEP 5404	Proseminar in Psychology of Adulthood and Aging	3
DEP 6438	Gerontological Assessment	3
DEP 6465	Psychology of Culture and Aging	3
DEP 6446	Cognitive Processes of Aging	3

Social Work Practice with Older Persons

SOW 5605	Medical Social Work	3
SOW 5845C	Counseling the Elderly	3
SOW 5905	Individual Study	1-3
SOW 6245	Social Welfare Policy and Services for the Elderly ¹	3
SOW 6247	Housing and Environmental Needs	3
SOW 6359	Social Work Treatment with Families of Elderly ¹	3
SOW 6646	Social Work Practice with Elderly ¹	3
SOW 6647	Advocacy in Social Work Practice	3
SOW 6649	Social Work Practice in Long Term Care and the Elderly	3

¹Open only to students with MSW degree or students in Master's degree program in Social Work.

Education

ADE 5195	Designing Education and HRD Programs for Disadvantaged Adults	3
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Criminal Justice

CCJ 5935	Special Topics: Crime and the Elderly	3
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Graduate Certificate in Health Services Administration

The objective of the certificate is to provide individuals with masters, doctoral or equivalent degree to develop an understanding of the context and/or skills of health services administration. This certificate is designed to assist individuals to advance in professions or careers related to health services administration.

Admission

Students must have earned a masters, doctoral or equivalent degree with either a management or clinical base. Such degrees would include but not be limited to the MBA, MD, DO, Masters of Nursing, Masters in Physical Therapy, etc. The student must be admitted to the certificate program by the Program Coordinator who will serve as the student's advisor. All students must submit a graduate application to the University and arrange for an interview with the Program Coordinator.

Program of Study: (18)

Students with managerial backgrounds will take 6 credit hours:

HSA 5125	Intro to Health Services	3
HSA 6415	Management Applications of Social Determinates of Health or	3

Students with clinical backgrounds will take 6 credit hours:

HSA 6185	Health Organization and Management	3
HSA 6186	Health Organization and Management	3

All students will take 12 credit hours:

HSA 6149	Strategic Planning and Marketing of Health Care Services	3
HSA 6176	Financing and Reimbursement of Health Systems	3

One of the Following two:

HSA 6155	Health Policy and Economics	3
HSA 6717	Advanced Health Services Management Seminar	3

One of the following five:

HSA 6205	Hospital and Health Facility Organization	3
HSA 6215	Managed Care Administration	3

HSA 5225	Long Term Care Management	3
HSA 6875	Administrative Residency	3
HSA 6197	Design and Management of Health Information Systems	3

Public Administration**Professional Certificate Development Administration and Management**

The objective of the Professional Certificate in Development Administration and Management is to develop skills and techniques for use by officials involved in public administration in developing countries and newly industrializing countries.

Required Courses

PAD 6836	International Public Administration
PAD 6838	Development Administration

An additional course from the Department must be selected from the following:

PAD 6839	Comparative Public Policy
PAD 6225	Comparative Public Budgeting

One course will have to be taken from the following in the College of Business Administration:

FIN 6626	International Bank Lending and Practices
FIN 6636	International Finance
MAN 6603	Problems in Comparative Management

One course must be taken from the following in the Economics Department:

ECS 5025	Economic Planning
ECS 5005	Comparative Economic Systems
ECS 5027	Economic Problems of Emerging Nations

Students enrolled in the certificate must obtain the consent of the certificate director before enrolling. Students must complete their program of study within three years from the date of admission and receive a minimum GPA of 3.0

Certificate in Human Resource Policy and Management

Human Resource Policy and Management is designed to give graduate students a range of policy-analytic and management skills. It provides training in alternative personnel systems, (civil service, collective bargaining, privatization and contracting out), personnel techniques for productivity improvement, current issues, and ethics and professionalism. This certificate emphasizes the application of behavioral science concepts and techniques to employers in a multicultural context.

Admission

All applicants must hold a baccalaureate degree from an accredited college or university. Students must be admitted to the program by the Program Coordinator, who will also serve as their faculty advisor. Admission to a certificate program does not ensure admission to the master's degree in Public Administration (MPA) program.

Note: Those students who apply for and are admitted to the Master of Public Administration degree program may have Certificate courses credited toward an outside specialization in Human Resource Policy and Management. However, if students have enrolled in more than one certificate program, a maximum of 15 semester hours from the certificate program may be accepted into the MPA program.

Program of Study: (15)

The following course is required:

PAD 6417	Public Personnel Administration	3
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Four of the following ten courses must be taken to complete the certificate.

PAD 5427	Collective Bargaining and the Public Sector	3
PAD 5460	Productivity Improvement	3
URS 6654	Organizational Design and Change	3
PAD 5435	Administrator and the Role of Women	3
PAD 5043	Government and Minority Group Relations	3
PAD 6437	Dynamics of Individual Growth	3
PAD 6418	Seminar in Public Personnel Policy	3

PAD 6419	Seminar in Applied Public Personnel Systems	3
PAD 6436	Professionalism and Ethics	3
PAD 5616	Contracting and Managing Third Party Governments	3

Students must complete their program of study within three years from the date of admission and receive no less than 3.0 GPA.

Certificate in International Comparative and Development Administration

This program is intended to develop skills and techniques for use by officials involved in development administration in developing and newly industrializing countries.

Admission

All applicants must hold a baccalaureate degree from an accredited college or university. Students must be admitted to the program by the Program Coordinator, who will also serve as their faculty advisor. Admission to the certificate program does not ensure admission to the master's degree in Public Administration (MPA) program.

Note: Those students who apply for and are admitted to the Master of Public Administration degree program may have Certificate courses credited toward an outside specialization in International Comparative and Development Administration. However, if students have enrolled in more than one certificate program, a maximum of 15 semester hours from the certificate program may be accepted into the MPA program.

Program of Study: (15)

The following two courses must be taken:

PAD 6836	International Public Administration	3
PAD 6838	Development Administration	3

An additional course from the department must be selected from the following:

PAD 6839	Comparative Public Policy	3
PAD 6225	Comparative Public Budgeting	3

One course must be taken from the following offerings of the College of Business Administration:

FIN 6626	International Bank Lending and Practice	3
FIN 6636	International Force	3
MAN 6603	Problems in Comparative Management	3

One course must be taken from the following offerings of the Economics Department:

ECS 5025	Economic Planning	3
ECS 5005	Comparative Economic Systems	3
ECS 5027	Economic Problems of Emerging Nations	3

Students must complete their program of study within three years from the date of admission and receive no less than a 3.0 GPA.

Certificate in Public Management

This professional certificate program will provide students with a thorough understanding of the managerial concepts and techniques of public administration and is designed particularly for those who already have a professional field of specialization.

Admission

All applicants must hold a baccalaureate degree from an accredited college or university. Students must be admitted to the program by the Program Coordinator, who will serve as their faculty advisor. Admission to a certificate program does not ensure admission to the master's degree in Public Administration (MPA) program.

Note: Those students who apply for and are admitted to the Master of Public Administration degree program may have Certificate courses credited toward the MPA core. However, if students have enrolled in more than one certificate program, a maximum of 15 semester hours from the certificate program may be accepted into the MPA program.

All certificate applicants will be encouraged to acquire proficiency in the use of microcomputers prior to initial registration. Applicants without this proficiency may wish to take PAD 5716, Information Systems for Public Organizations, prior to, or concurrent with, initial course work.

Program of Study: (15)

PAD 6053	Political, Social, and Economic Context of PA	3
PAD 6106	Organization Theory and Administrative Behavior	3
PAD 6227	Public Finance and & Budgetary Process	3
PAD 6417	Public Personnel Administration	3
PAD 5934	Contemporary Issues in Public Administration	3

Students must complete their program of study within three years from the date of admission and receive no less than a 3.0 GPA.

Social Work**Post-MSW Certificate in Clinical Practice**

This certificate program is designed for MSW practitioners who specialized in macro/administrative or generalist practice and wish to increase their knowledge and skills in direct services/clinical practice with services to children and families of the elderly. In most cases, MSW practitioners completing this certificate will have the requisite MSW course work for clinical licensure in the state of Florida.

The post-MSW Certificate in Clinical Practice program of study is under revision. Students should anticipate changes in the 6000 level courses.

Program of Study

SOW 5125	Human Behavior and Social Environment II-Psychopathology
SOW 6351	Intervention Strategies with Marriage and the Family or
SOW 5643	Understanding the Process of Aging
SOW 6655	Advanced Intervention Strategies with Children and Adolescents or
SOW 6646	Social Work Practice with the Elderly
	Social Work Elective (clinical)
SOW 6635	Field Practicum II
SOW 6543	Integrative Field Seminar II

College of Urban and Public Affairs

Dean Ronald M. Berkman
Associate Dean Donald E. Klingner
Assistant Dean Valerie L. Patterson

Faculty

Alberini, Velmarie, M.S.W. (Florida International University), Instructor, Student Services Coordinator and Acting MSW Coordinator
Averch, Harvey, Ph.D. (University of North Carolina), Professor, Public Administration
Bacarrisse, L. Yvonne, M.S.W., A.C.S.W., L.C.S.W. (Tulane University), Associate Professor, Social Work
Becker, Fred, Ph.D. (University of Oklahoma), Associate Professor, Public Administration
Bergwall, David, D.B.A. (George Washington University), Associate Professor, Health Services Administration
Berkman, Ronald M., Ph.D. (Princeton University), Professor, Public Administration and Dean
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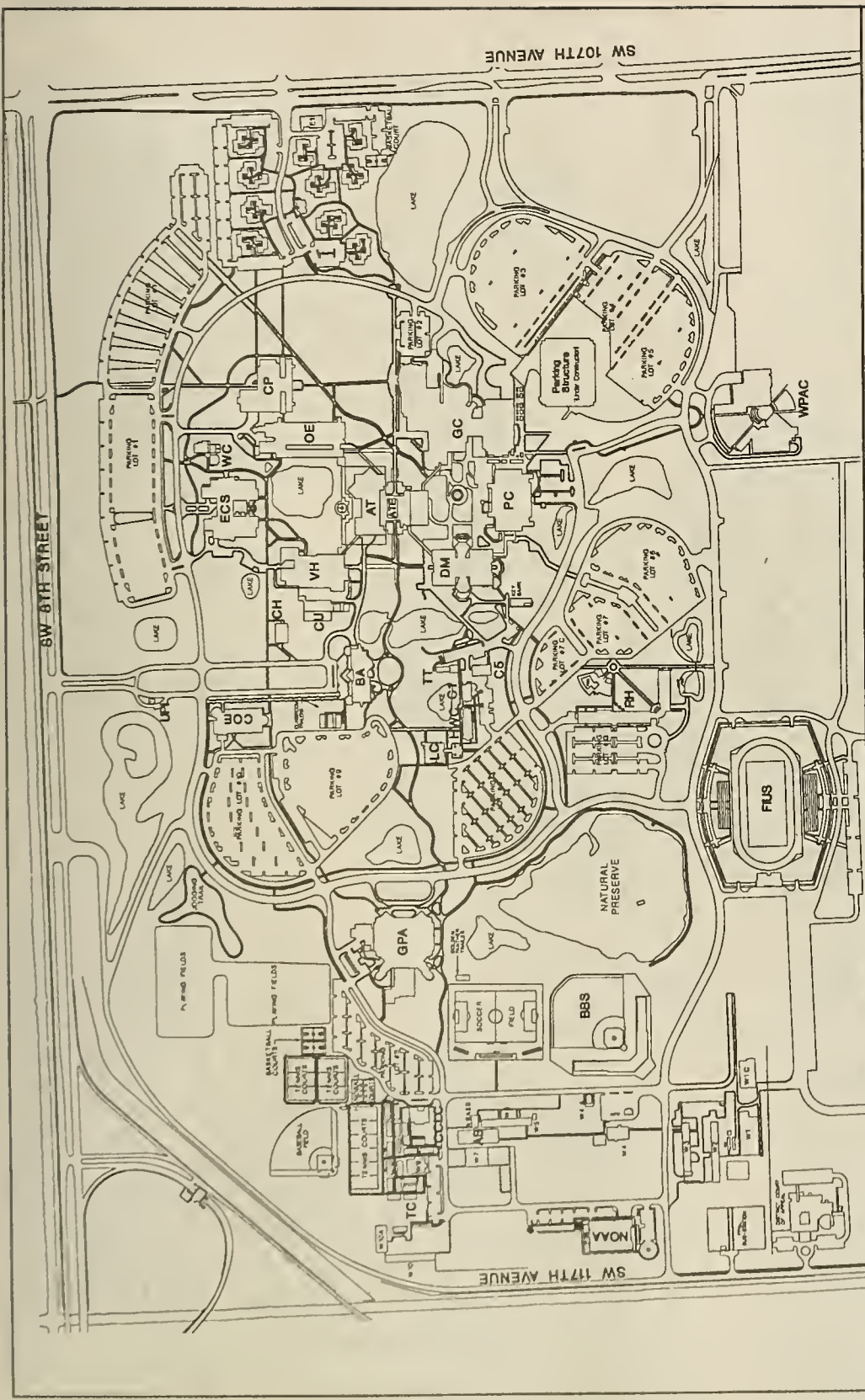
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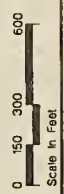
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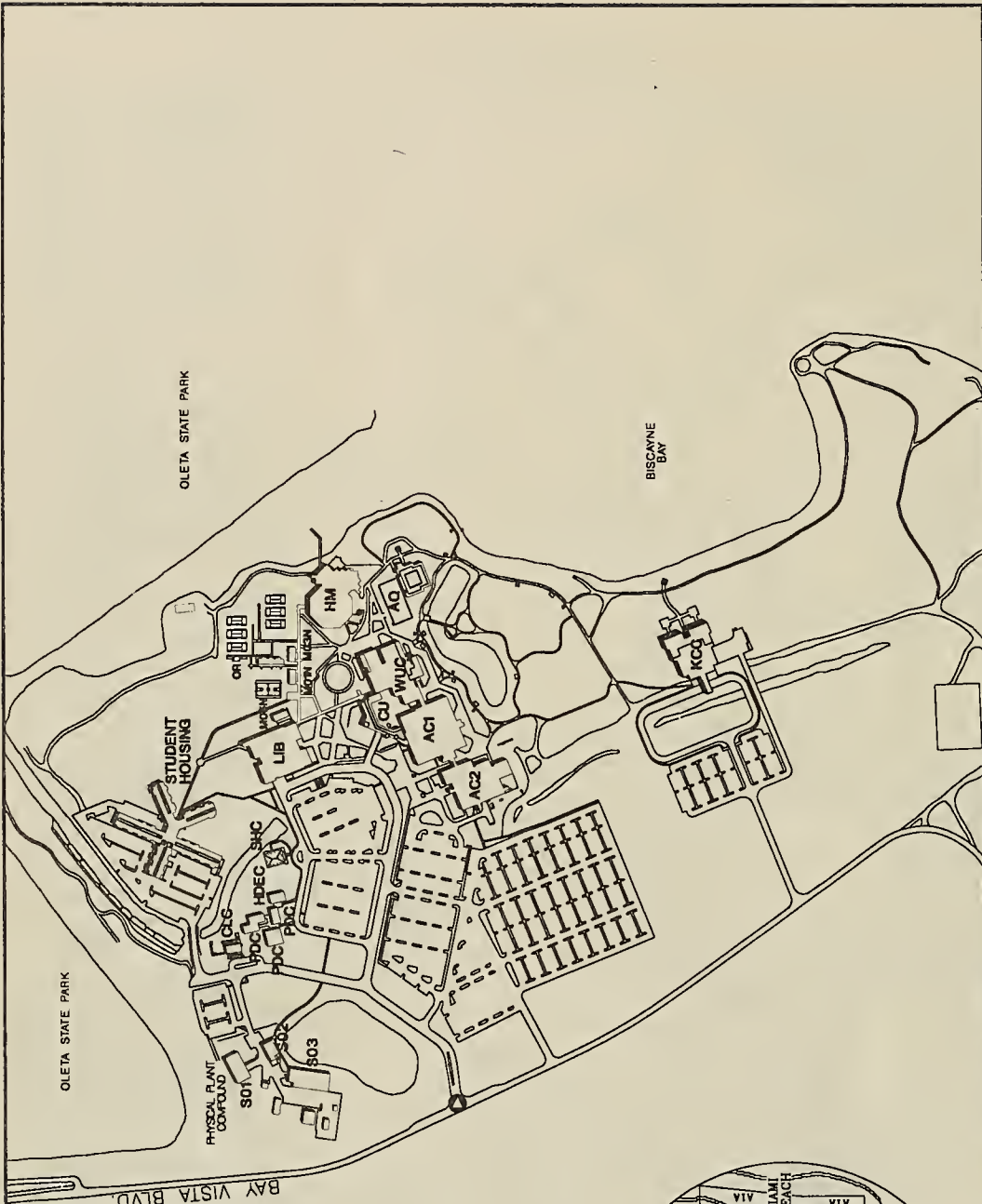
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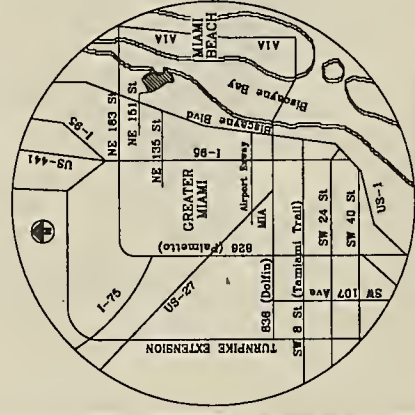
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Index

Academic Affairs, Office of, 24
 Academic Calendar, 2
 Academic Definitions, 15
 Academic Degree Requirements, 15
 Academic Information, General, 6
 Academic Programs, 9
 Academic Program and Course Regulations, 15
 Academic Warning, Probation, Dismissal, 18
 Accounting, 133
 Accreditation and Memberships, University, 8
Add-On Certification Programs, 176
 Emotional Disturbances, 176
 Mental Retardation, 176
 Guidance, 176
 ESOL, 163
 Health Occupations Education, 187
 Specific Learning Disabilities, 176

Admissions, Office of, 12, 32
 International Admissions, 12
 Administration and Staff, 53
 Administration and Supervision of Vocational Education, 184
 Adult Education, 164
 Affiliated Student, 15
 AIDS Policy, 29
 Annual Estimate of Cost (International Students), 13
 Alumni Affairs, 36
 Americans with Disability Act, 29
 Anthropology, 111
 Art Education, 182
 Art Museum, 27

Arts and Sciences, College of, 55
 Biological Sciences, 57
 Chemistry, 63
 Computer Science, School of, 65
 Creative Writing, 67
 Economics, 68
 English, 72
 Environmental Studies, 74
 Geology, 75
 History, 81
 International Relations, 85
 International Studies, 87
 Latin American and Caribbean Studies, 88
 Linguistics, 89
 Mathematics, 92
 Modern Languages, 93
 Music, School of, 99
 Physics, 101
 Political Science, 103
 Psychology, 106
 Religious Studies, 111
 Sociology/Anthropology, 113

Statistics, 117
 Visual Arts, 118
 Faculty, 122
 Athletics, Intercollegiate, 35
 Auxiliary Services, 29
 Biological Sciences, 57
 Board of Education, State, 6
 Board of Regents, 6
 Broward County Programs, 10
Business Administration, College of, 129
 Accounting, School of, 133
 Decision Sciences & Information Systems, 135
 Finance, 135
 Management and International Business, 136
 Marketing and Business Environment, 137
 Faculty, 154
 Business Administration, MBA, 131
 Business Administration, Ph.D., 132
 Business and Finance, Division of, 29

Campus Maps, 317
 Campus Ministry, 33
 Campuses, University, 7
 Career Services, 33
Centers and Institutes, 41
 Accounting, Auditing and Tax Studies, 41
 Administration of Justice, 41
 Advanced Technology and Education (NSF-CATE), Center for, 41, 211
 Banking and Financial Institutions, 41
 Children's Creative Learning Center, 42
 Children and Families at Risk, 42
 Drinking Water Research Center, 42, 211
 Economic Research and Education, 42
 Educational Development, 43
 Elders Institute, 43
 English Language Institute, 43
 Family Business Institute, 44
 FAU-FIU Joint Center for Environmental and Urban Problems, 44
 FIU Institute of Government, 45
 Future Aerospace Science and Technology, Center for Cryoelectronics (FAST) 44, 211
 Hemispheric Center for Environmental Technology (HCET), 45, 212
 HRS/Children, Youth & Families Professional Development Center, 45
 International Executive Education (CIEE), Center for, 43

International Hurricane Center, 46
 Judaic Studies, 46
 Labor Research and Studies, 46
 Latin American and Caribbean Center, 46
 Lehman Center for Transportation Research (LCTR), 47, 212
 Management Development, Center for, 47
 Manufacturing Research Center (MRC), 47, 212
 National Policy and Resource Center on Nutrition and Aging, 48
 Public Management and Community Services, 48
 Public Opinion Research, 48
 Public Policy and Citizenship Studies, 49
 Small Business Development Center, 49
 Southeast Florida Center on Aging, 50
 Southern Technology Research Center STAC, 50, 213
 Women's Studies Center, 50
Certificates, 10
 Accounting, 138
 Adult Learning Systems, 169
 African-New World Studies, 119
 Banking, 138
 Business Environment, 138
 Clinical Practice, 315
 Development Administration and Management, 313
 Educational Leadership, 169
 Gerontology, 312
 Health Promotion, 270
 Health Services Administration, 313
 Human Resource Policy and Management, 314
 Integrated Communications: Advertising and Public Relations, 282
 International Bank Management, 139
 International Business, 139
 International Comparative and Development Administration, 314
 Justice Administration and Policy Making, 312
 Latin American and Caribbean Studies, 120
 Law and Criminal Justice, 312
 Managing Quality Healthcare Systems, 139
 Marketing, 139
 Occupational Therapy, 261
 Post-Master's Nurse Practitioner, 288
 Public Management, 314
 Reading and Language Arts, 179
 Spanish Language Journalism, 282

Student Media Advising, 281
 Training and Human Resource Development, 139
 Certification Programs, 176
 Change of Grade, 17
 Change of Major, 16
 Chemistry, 63
 CIBER, 137
 Civil Engineering, 215
 College/Major Classification, 16
 Community College Relations, 32
 Community Mental Health Counseling, 171
 Computer Engineering, 222
 Computer Science, School of, 65
 Conference Services, 32
 Construction Management, 245
 Continuous Improvement, Office of, 31
 Controller's Office, 29
 Counseling Services, 37
Courses
 Drop/Add, 16
 Forgiveness Policy (repeated course), 17
 Registration, 16
 Community College Teaching, 168
 Course Numbering System, Statewide, 51
 Creative Writing, 67
 Credit by Examination, 17
 Criminal Justice, 294
 Curriculum and Instruction, 165, 167, 178, 186

 Decision Sciences, 135
 Design, School of, 241
 Development, Office of, 33
 Dietetics and Nutrition, 254
 Disability Services for Students 33
 Americans with Disabilities Act, 29
 Dismissal, Academic, 18
 Distance Learning, 37
 Drinking Water Research Center, 42, 211

 Early Childhood Education, 177
 Economics, 68
Education, College of, 157
 Educational Foundations and Professional Studies, 160
 Educational Leadership and Policy Studies, 164
 Educational Psychology and Special Education, 175
 Elementary Education, 177
 Health, Physical Education and Recreation, 180
 Subject Specializations, 182
 Faculty, 206
 Educational Administration, 168
 Educational Leadership, 165

Educational Psychology, 170
 Electrical Engineering, 221
 Elementary Education, 177
Engineering and Design, College of, 209
 Engineering, School of, 210
 Civil and Environmental Engineering, 215
 Construction Management, 245
 Design, School of, 241
 Electrical and Computer Engineering, 221
 Engineering Management, 230
 Industrial and Systems Engineering, 228
 Mechanical Engineering, 233
 Research and Development Centers, 211
 Faculty, 249
 English, 72
 English Education, 182
 English Language Institute, 43
 Environmental Health & Safety, 29
 Environmental Engineering, 215
 Environmental Studies, 74
 Environmental and Urban Systems, 215
 Equal Opportunity Programs, 29
 Evening and Weekend Programs, 11
 Exceptional Student Education, 174
 Executive MBA, 130
 Exercise Physiology, 180
 External Programs, 213, 240

 Facilities Management, 30
 Fees, 22
 Final Examinations, 17
 Finance, 135
 Financial Aid, 21, 32
 Forgiveness Policy, 17

 General Counsel, Office of, 30
 General Information, 6
 Geology, 75
 Governmental Relations, 39
 Graduate Studies, Office of, 24
 Final Grades, 18
 Grading System, 17
 Graduation Application, 18
 GRE, 13
 Greek Organizations, 34
 GMAT, 13

 Health Center, 38
 Health Education, 180
 Health Occupations Education, 182, 184
 Health Services Administration, 296
Health, College of, 253
 Dietetics and Nutrition, 254
 Medical Laboratory Sciences, 258

Occupational Therapy, 261
 Physical Therapy, 264
 Public Health, 266
 Faculty, 271
 Higher Education, 168
 History, 81
 HIV/AIDS Policy, 29
 Home Economics Education, 184
 Human Resources, 30
 Human Resource Development, 164
Hospitality Management, School of, 273
 Faculty, 277
 Housing, 36
 Human Resources Development, 164

 Immunization, 16
 Incomplete Grade, 17
 Industrial Engineering, 228
 Information Resource Management (IRM), 24
 Inspector General, Office of, 30
 Instructional Media Services, 26
 Intercollegiate Athletics, 40
 International Admissions, 12
 International Business, 136
 International Development Education, 160
 International Relations, 85
 International Student and Scholar Services, 34
 International Studies, 26, 87
 International Students, 12

Journalism and Mass Communication, School of, 279
 Faculty, 284
 Judicial and Mediation Services, 35

 Landscape Architecture, 241
 Latin American and Caribbean Studies, 88
 Legal Studies, 37
 Lehman Center for Transportation Research, 212
 Libraries, 25
 Linguistics, 89

 Management, 136
 Marketing and Business Environment, 137
 Mass Communication, 280
 Mathematics, 92
 Mathematics Education, 183
 Mechanical Engineering, 233
 Media Relations, 39
 Medical Laboratory Sciences, 258
 Minority Student Services, 34
 Modern Languages, 93
 Modern Languages Education, 183
 Music Education, 100, 183
 Music, School of, 99

- Non-Degree Seeking Students, 15
- North Campus and Enrollment Services, 32
- Nursing, School of, 285**
 - Faculty, 290
 - Occupational Therapy, 261
 - Ombudsman, Office of, 34
 - Orientation, 34
 - Parks and Recreation Management, 180
 - Physical Education, 180
 - Physics, 101
 - Physical Therapy, 264
 - Political Science, 103
 - Policy and Management, School of, 294
 - Precollegiate Programs, 34
 - President, Office of, 53
 - Probation, Academic, 18
 - Psychology, 106
 - Public Administration, 300
 - Public Health, 266
 - Public Relations, 281
 - Public Safety, 30
 - Publications, 39
 - Purchasing Services, 31
- Reading, 178, 179
- Refunds, Fees, 23
- Registrar, Office of, 15, 32
- Registration, 16
- Reinstatement, 22
- Religious Studies, 111
- Residency, Florida, 19
- Roz and Cal Kovens Conference Center, 37
- School Counseling, 171, 176
- School Psychology, 173
- Science Education, 183
- Sexual Harassment Policy, 30
- Social Studies Education, 183
- Social Work, School of, 307
- Sociology, 113
- Southeast Florida Educational Consortium, 8
- Southeast Regional Data Center, 25
- Special Education Programs, 172
- Sponsored Research and Training, 27
- Sport Management, 181
- Statewide Course Numbering System, 51
- Statistics, 117
- Student Activities, 34
- Student Affairs, Office of, 33
- Student Classification, 15
- Student Counseling, 34
- Student Fees and Accounts, 22**
 - Payments, 22
 - Waivers, 22
 - Refunds, 23
- Student Government Association, 35
- Student Health Clinic, 35
- Student Records, 18
- Taxation, 134
- Technology Education, 185
- Telecommunications, Office of, 25
- Telephone Registration, 16
- Teaching English to Speakers of Other Languages (TESOL), 162
- Transcripts, 19
- Undergraduate Studies, Office of, 24
- University Advancement and Student Affairs, 33
- University Budget Planning Office, 31
- University Centers, 35
- University Communications, 39
- University Computer Services, 24
- University Events, 39
- University Outreach, 37
- University Relations, 39
- Urban Education, 162
- Urban and Public Affairs, College of, 291**
 - Policy Management, School of, 294
 - Criminal Justice, 294
 - Health Services Administration, 296
 - Public Administration, 300
 - Social Work, School of, 307
 - Faculty, 315
- Vehicle Registration Fee, 23
- Veteran's Affairs, 19
- Victim Advocacy Program, 36
- Visual Arts, 118
- Vocational Home Economics Education, 185
- Vocational Industrial Education, 185
- Vocational and Technical Education Leadership, 187
- Volunteer Action Center, 36
- Warning, Academic, 18
- Withdrawal, Student, 16
- Women's Center, 36
- Women's Studies Center, 50

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